

# THE NOR-WEST FARMER.

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WINNIPEG, MANITOBA, FEBRUARY, 1897.

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in Advance.

## LIVE STOCK.

### Our Illustrations.

1. West Highland Bull, An-t-Oganach, bred by John Stewart, Ensay, Island of Harris.

2. Hackney filly, Lily Grant, bred by and the property of Jas. McMeekin, Busby, Scotland. She was foaled in 1894, and won 1st in her class, champion gold medal and reserve for the fifty-guinea challenge cup at Glasgow, 1896. Mr. McMeekin was judge of Hackneys at the recent New York show.

### The Pure Bred Male.

A little breeze has been stirred up in the Neepawa district by the decision of the local agricultural society to discontinue, after this year, the giving of prizes to any except the offspring from registered males. The Farmer has been asked to give a little space to the discussion of this question, especially as some of its readers are said to regard this arrangement as premature. So long as such discussions turn upon facts and principles in natural law, The Farmer will be glad to find space for them, because it is sure, in some way or other, to bring out truths that every breeder of farm stock from a horse down to a chicken is the better for being kept posted on. There are known cases in which serious injury has been done to progressive breeding by a too strict rule being brought to bear. One memorable example of this was the rejection of the get of Robin Hood, one of the earliest and best Shorthorns ever seen in Manitoba, only because of a broken link in an otherwise faultless pedigree, where the quality of the animals themselves gave all but technical proof of the soundness of their lineage. Walter Lynch, if he would find time, could tell us something further about this case that is worth hearing.

There are two fundamental principles on which about all worth an effort in breeding depends. First is the law of heredity, "Like breeds like." There are among wild animals rare "sports" from this rule, but a wolf is to-day the same kind of an animal he was a century or ten centuries ago, while cross-breeding and selection are continually introducing new varieties of dogs to compete for public favor with the older types.

Along with the first great law of likeness to the parent type, we find that human control has introduced, and more or less successfully fixed, types of domestic animals, which exemplify the principle of "variation" within certain limits. Environment, as well as direct purpose, has helped to intensify and increase these variations, and we may all see, if we care to take the pains, how much has been done within the last two centuries by skilled selection and mingling of blood to produce types suited to our wants as civilized beings.

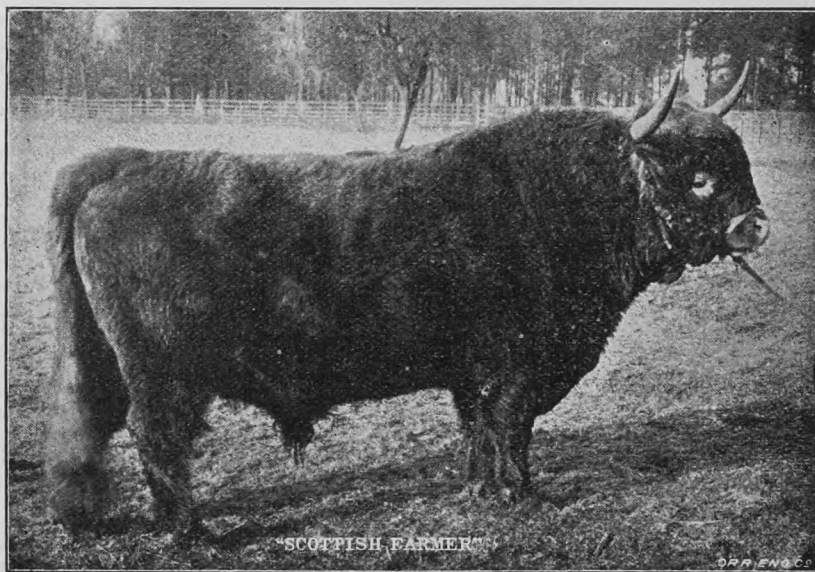
But once we have succeeded, sometimes by a lucky accident, generally by skilled effort, in producing a type worth preserving, a continuous effort must be made to perpetuate it as exactly as possible. We do this by mating with the nearest procurable example, sometimes by in and in breeding. A few generations in capable

hands will do much to fix a type, the rejection of every animal out of conformity to our chosen type being a necessary condition to success. The creation and fixing of the Shropshire breed of sheep is a case in point of very recent origin, and the processes by which the present stage of perfection have been reached are well known or may be to any one who cares to investigate.

But just as careful mating, selection and rejection will be rewarded, so carelessness will be followed by shoals of mongrels of every degree of likeness and unlikeness to the immediate parents. This is largely due to the principle of atavism, or the tendency to revert to the type of some ancestor on either the male or female side. A half-breed Indian may have children not distinguishable from whites, and they again may, most likely will, have some children of strongly Indian type. It is at this point we begin to see the value of pure-blooded ancestry. We object to niggers and Indians in our family tree, and

and depreciation, and apart from all other considerations, we find that in the old country a man who has a mare of first rate quality would not put her to the service of a mongrel horse, no matter how good-looking as an individual, or how low his service fee. He may not expect ever to register the offspring or use it for any but common farm work. Still he falls in with the leading of general experience, and hires a pedigreed sire with registration as a proof of the value of that pedigree. Just what the individual pedigree may be worth every man may judge for himself. The aggregate result of this process is that in any district where a given type prevails, the general character of the horse flesh is so uniform that a good average mare bred to a registered male of the breed will throw colts barely distinguishable from fully pedigreed stock.

This is not theory, but a plain history applicable to a score of varieties of the domestic animals in the British Isles. One way to test the value of pure breeding is



"SCOTTISH FARMER"

WEST HIGHLAND BULL, AN-T-OGANACH.

therefore want a pedigree that will ensure us against the unwelcome blend. It won't satisfy us to be told that one or two of the family are fairer than many a white man. We see others with kinky hair and thick lips, and decide there must be a nigger in the fence somewhere.

As we get more careful and better skilled in our researches, we begin to recognize the presence of another principle, called prepotency, which just means that, say a Clydesdale horse of intense vitality will communicate to his offspring, by females of differing types, so much of his own individuality that 80 or 90 per cent. of them will turn out very like their sire, not only in outward form, but in many other characteristics. This prepotency certainly varies in its intensity, even in the same animal, and may differ still more in even pedigreed animals of the same breed. The perfection of modern breeding consists in the almost certainty with which we can count on cattle of Cruickshanks' breeding, or the blend of Prince of Wales and Darnley blood proving true to the type aimed at when we mate them. Every deviation from the desired type means degeneracy

to examine the records of prices made by the more carefully bred specimens. A few wealthy and aristocratic fanciers may cause an occasional spurt. The fancy prices made for Shorthorns thirty years ago and by Shires to-day may be partially explained in this way, but Earls and foreign dons have done nothing to induce fancy prices for Scotch Blackface sheep, which keep rising in price every year.

Looking to the whole case, as it presents itself to an impartial onlooker, we are pretty nearly forced to the conclusion either that the men who go on every year in the old country paying, as a rule, good prices for thousands of pedigreed males, must be laboring under some delusion, or to the other conclusion, that they understand their business better than some of us here do, and are spending their money to good purpose.

There is yet another alternative to which we may turn. The practice of breeding only from females of good type and from pedigreed males may be all right in a country with set, old-fashioned ways like Britain. But, and this is the contention offered by those at Neepawa, who object

to the new departure, such a course may be premature here, and the old plan should get a little longer trial before it is rushed off the stage. Some reforms may be too hastily pushed. Is this one of them? Others may be desirable enough, but are too expensive. If that is so here, it is really desirable to avoid doing anything rashly, even if it should be done some day later on.

One of the simplest tests that can be applied to all such cases is the money value of the product. It may be safely asserted that any man in that same district wanting seed potatoes, and up to his business, would rather pay Gregor McGregor 40 cents for a few bushels than take them at 10 cents from a nearer neighbor, who regularly sells all he can sell, and plants his own crop from the remainder. He does this because he is buying from a man who knows what he is about. The cheap combination may have some very decent sorts in it, but that is not enough. Is it any wiser to buy and breed from a non-descript mare than to buy from a cheap potato pile.

A thorough student of breeding will make every beast he looks at an object lesson, and draw his own conclusions. Here is a composite creature, big head and spindle legs; has somebody been blending Clydesdale and trotting horse blood? Is it a solitary specimen, and now it is here, will its owner try to make it a trotter or a cart horse, or sell it to somebody that knows still less than himself, if such a man can be found, and, when found, has any money to fling away? Some one has already suggested that the only registered horse on the plains is a trotter. That is perhaps a misstatement of fact, but, if true, there is a ready opening for the directors of the Beautiful Plains society to do good business off-hand. Let them hire that horse and its owner to travel next season 70 miles away from Neepawa. A few years ago The Farmer criticized adversely the Percheron, and has never regretted it; there is material enough now on which to found very reliable criticism on the standard bred horse as a farmer's friend.

Judging by results, the horse is what we need most light on. A short time ago Henry Nichol, of Brandon, was referred to as a rare example of the farmer who in Manitoba appears to have combined without loss wheat-growing and colt-breeding in two lines. Were he at home and asked to lay down the law, as he is well fit to do, it would most likely be something in this form: 1. Keep more mares than you need for the actual work. 2. Breed the best to the best; it is none too good. 3. If good blood is indispensable as a foundation, a good oat bin wisely handled is the big half of the coming horse.

Our half hour is up: somebody else take the floor. Where is Mr. Sirett? Somebody accuses him of saying that the most of the breed is in the oat sack, which is not a very dangerous doctrine. Next month we shall return to the matter again, but have said enough now to draw out a discussion on the merits. An unregistered sire may have good in him. We shall see.

The rough, staring coat of calves and colts their first winter is often due to troubles of digestion from changing suddenly from succulent to dry feed. But a part is also due to drinking too little water, because the water in winter is always cold. If water for young animals be warmed to a temperature near that of animal heat, they will drink more freely, and their food will digest, instead of remaining in the stomach breeding fevers and disease. Do away with constipation in young stock, and most of the difficulty in keeping them thrifty will be overcome.

## The Agricultural Horse.

By Sandy Scott.

In treating of the agricultural horse, one specially fitted for the heavy work of the farm is meant. It is not my intention to consider in this article all the points that go to constitute our ideal agricultural horse, but rather to take up a few of the qualities which are from a business point of view essential in this class of a horse, and at the same time I will attempt to show why I believe those qualities to be essential and superior. Two things required in this class of horse are strength and action. Strength and action are coupled because strength can not be used to the best advantage without good action. Good action in a work horse is not of the mincing, prancing order, but is characterized by a long, direct, forceful stride, bending the knees and kinking the hocks in good shape, with close action before and behind. Close action is useful in the furrow, on the winter roads, and in the mud; the horse that goes wide is a flounderer both in snow in winter and in the mud in summer. He should have limbs and feet sound and of such quality that they will be likely under ordinary usage to remain so, and the whole conformation of the limbs should be such as will enable the horse to use his strength to the best advantage. He should weigh 1,250 to 1,400 lbs., be well muscled wherever a horse should carry muscle, and possess a good amount of bone. In looking over our horse we can see at a glance if he has sufficient weight for our purpose; next we examine the quality of his make-up. Beginning at the ground, the hoof should be round and deep, with a good open heel. This kind of hoof is not liable to thrush. The wall of the hoof should be strong and tough. I do not know of a surer indication of an enduring horse (other qualities of build not being lost sight of) than a tough, flinty hoof. The pastern should be sloping. A sloping, flexible pastern acts like a hinge, and enables a horse at draft work to plant his foot squarely with an even bearing on toe and heel, whether the foot be extended away in front or back under the body. It helps a horse in the same way in climbing a hill or in going down one, and in trotting the flexible pastern acts like a spring relieving the jarring on the limb. The bones should be hard, flat and free from meatiness, if we would avoid the disorders that coarse-boned, meaty-legged horses are liable to. We can't have too much bone of the right sort. A strong-boned horse is less likely to become blemished in heavy work than a light-boned horse. The forearm should be long in proportion to the shank; this gives the horse better leverage at a pull. The hind leg, from a side view, should be wide from fetlock to stifle, including the hock, which should be wide from a side view, and in proportion narrow and sharply defined from a front view, and the whole joint clean cut and free from puffing. The shank should set forward from the hock, thus giving leverage and propelling power. A horse with limbs modelled after this type is, as a rule, a superior animal at a pull or in climbing a hill with a load, and can generally keep up a good fast walk, even when heavily loaded. If we watch this style of a horse starting a heavy load, we notice that he extends his fore feet away out in front of his body; his hind legs are placed well under him, and then he squats down and heaves his whole body forward, as if on a pivot. This is the style of pulling that we all admire, and which the teamster often gets the whole credit for, but comes less from training than (to use a slang phrase) because he is built that way. The most important part of the

## BREEDERS' DIRECTORY.

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horse's body lies between his shoulder and stifle. His back should be short, but he should be long between elbow and stifle. He should have lots of rib, and well sprung especially beneath the shoulder blades. No point in the make-up of the horse's body counts for so much as an indication of constitution and thrift as a deep, well-sprung rib beneath the shoulder blade. Those parts of the horse described stand in the same relationship to the horse that the running gear of the wagon stands in to the whole wagon. In the wheels and axles we look for the strength to carry the load; the quality of material, proportion and workmanship that will insure it lasting some length of time, and the style of build best adapted to lightness of draft. So in the horse I have endeavored to describe those qualities which are a guarantee of strength and endurance, and of ability to stand a heavy strain, also those forms of build which insure the greatest amount of power for the exertion applied.

### Highlanders in the West.

The Scotch Highland breed of cattle is beginning to find special favor on the western ranches. Mr. Stimson, one of the very oldest cattlemen, has several bulls in use, and Mr. G. C. Peterson, who bought, some years back, the herd originally imported from his native Glenlyon by the late Robert Campbell, of Strathclair, cannot supply the demand for bull calves of the breed. On the C. P. R. farm at Forres also about 40 pure-blooded descendants from Sir Donald Smith's Silver Heights herd is being used for both pure and cross breeding. Since the new year a car of cross bred 3-year-old beef has been brought into Winnipeg and sold, its flavor ensuring a ready sale. The hides also are being dressed as robes, and will find a ready market. One of the main obstacles to the more general use of the breed is the difficulty of finding new blood without going back to Scotland. Those already here are making a decided advance on the quality of the old country product, the choice herbage of the foothills being superior as feed to anything found in Scotland for such stock.

One of the shrewdest and most discerning old stockmen in Manitoba says he has seen capital results in the old country from crossing the Highland bull on common Ayrshire cows. The steers from this mating had much of the fine Highland flavor, and the females, without losing much, or any, of the milking properties of the dams, were much improved in constitution. Perhaps the hint may be taken out in the west, where such a cross on dairy cows would occasionally come in handy.

### The Ontario Breeders.

The annual report for 1895-6 of the various live stock association of Ontario, prepared by the secretary, Mr. F. W. Hodson, of Guelph, and printed by order of the legislative assembly, has just been issued, and furnishes proof, if any proof were needed, of the activity and ability with which the affairs of these associations are handled. The five Dominion associations, the Cattle, Swine, Sheep, Short-horn and Ayrshire breeders, and the Hackney, Clydesdale, Shire and Horse Breeders' societies all have separate organizations to care for their interests. At the various meetings held, separately and jointly, by these societies much useful discussion took place, and some excellent papers were read. Elsewhere in this issue will be found extracts from the proceedings and papers read.

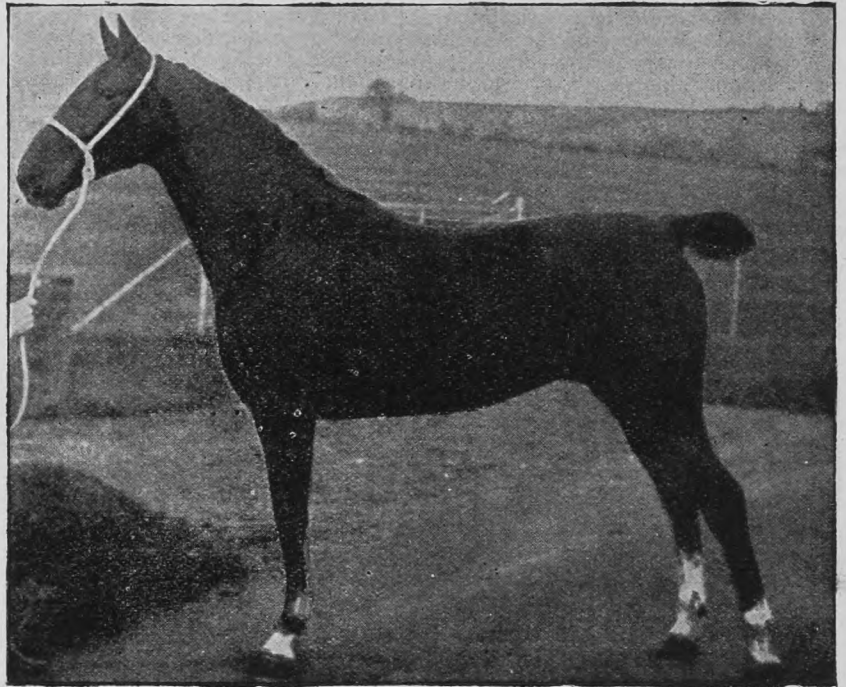
### A Good Handling Steer.

John McTurk, Elkhorn, writes The Farmer to say that he thinks much more should be done by those who have charge of the progress of this country than is done now to encourage the introduction of good blood in our cattle stock. He says there could be no more valuable object lesson in stock-raising than to have half a dozen choice handling steers put up to feed on one of our experimental farms, in competition with as many of the hard scrubby sort, and see after four or five months' feeding what each lot could take out of the same feed. A beast whose hair inclines to the silky feel, with a soft, thick hide that moves easily and fills the hand, is the ideal money-making steer, no matter what his breed; while the scrub, even if put on rich feed, finds his stomach gets clogged and falls off his feed, as all experience here and elsewhere goes to prove beyond doubt.

At present prices for stall-fed beef, it is difficult to see how the price of the feed given can be taken out of the beasts, and

ed practically every feeding season. In the report of Ontario Farmers' Institutes for 1896, A. P. Ketchen reproduces the following, which is still as good as new:

"Mr. Britton, of Toronto, gave evidence before the agricultural commission as follows: 'In 1873 I bought 103 common native cattle back of Peterborough. They were three years old, and I thought I would try an experiment with them, I tied them up in two rows, and next to them I put two rows of well-bred grades from near Goderich. I fed these cattle for seven months, and the common cattle consumed the most feed and only gained 130 pounds per head, while the grades gained 270 pounds' (notice the difference in gain on the same feed); 'when sold I got \$4.63 per hundred weight for the common cattle, and \$5.37½ for the grades, or a difference in favor of the grades of \$16 per head.' It is not enough that cattle have two or three crosses of pure blood in them, but it is the cattle of the right type that feed best. Mr. John McMillan, M. P., of Huron, one of the most successful cattlemen in the province, says: 'I will give



HACKNEY FILLY, LILY GRANT.

certainly there is a very small margin at the best to pay interest on the money put in and the cost of handling. According to the report of Mr. Borthwick, quoted in this issue, there has never been any year like the last in the miserable quality of the return from beef consigned to the London market, and this country has suffered with the rest in the reduced prices of the stock we have sent over. But if the price is small, the loss on handling the worst kind of stock will aggravate the evil.

Mr. McTurk would ask the government and the railroads to do a great deal more than they have ever yet done for good stock if the country is to advance as it ought. He thinks 150 good bulls scattered through the country, at very low figures, would be well-spent money, and a better investment than sending some of the lecturers round the old country, who in the last few years have been figuring at home as the exponents of the resources of the west. Certainly there should be every possible modification of the quarantine laws, consistent with proper regard to the health of the stock we import.

The battle between the rough, ill-bred steer and the smooth, round one is not a thing of yesterday, but needs to be renewed

you one sample of what I saw in the cattle market of Glasgow. Standing together with two Canadian farmers in one of the sale booths we saw six steers sold. They would average about 1,325 pounds, all grades, but a little rough. The highest price paid was £16, 10s. The next animal was a well-bred, round-ribbed, smooth, compact little beast that would weigh about 1,250, which was sold for £18, 10s. Here was £2, or \$10, more money for an animal seventy-five pounds lighter in weight.' It is worth noticing that these 'smooth, compact little beasts' are just the kind of cattle that can be produced at a minimum cost to the feeder."

Sanders Spencer, the well-known breeder of Yorkshire pigs, says that when farming in England, 30 years ago, he fed his cart horses on light barley, soaked in water for twenty-four hours, the water drained off, and the barley either kept in the tub or put in a heap in a corner of the place until it germinated. The horses thrived well on it. Farmers here who are a good way from the chopping mill might give this plan a trial.

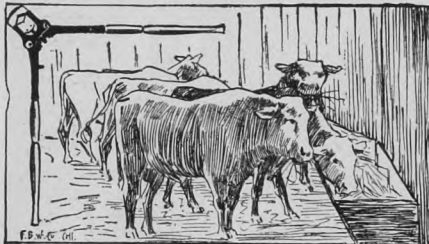
### Dehorning.

In another part of this paper will be found reference to the experience of 70 dairy farmers in Ontario, who have been induced to dehorn their cows. Nearly every one of them expresses approval of the practice as a complete check on the habit of hooking, so common in all cattle. One man thinks it would injure the looks of his cows in the show ring, and another says his dehorned cows still bunt each other. It is admitted that cattle dehorned as calves do now and then learn to bunt with their bare heads the same as Polled cattle, but wherever dehorning of feeding stock has been practiced here in the west, there is the general testimony of the owners that they feed much more quietly and need much less space; an important item here. It is now six years since the practice was introduced into Canada, and in January, 1892, the parties operating were brought up on a charge of cruelty to animals, but the provincial government put in a stay of proceedings, and set a commission to report on the whole case. In due time that commission, after hearing all parties, recommended the practice from an economic point of view and the enactment of laws to protect skilled operators. At first the operation was performed on grown animals with a saw, but most of the work is now done with clippers. The most popular now of all known dehorning implements is the Keystone, invented by a farmer in 1892, and shown at the World's Fair in 1893, where it was awarded a diploma and medal. It has since had the

and of good quality, with a longer range of low prices than ever known before. The same applies to frozen beef—namely, a dull, dead level of low prices, only retrieved in the last month of the year. Every means was tried to hold up the market, but of no avail, as America week after week kept pouring in chilled beef at prices very little over what frozen should have made; then mutton, however bad it was last year, has been worse this. In other years we had some good month or two, but bad as the beginning of the year was, the end is quite hopeless, as arrivals of Australian sheep are very heavy and very few wanted. The quality of the Australian new season's mutton and lamb is very superior; the latter stands a chance of making a good price, but the outlook for mutton is hopeless."

### Principles of Feeding.

In the first place, we must understand that plants contain substances almost identical in composition with the substances which comprise the animal body. Animals eat plants, digest a portion of them, and use the digested portion in building up the different parts of their bodies, in producing milk, or in producing heat and energy. Thus, some of the substances form bone, some form flesh, muscle, blood, or milk; some form fat; while others are consumed in the production of heat, which is necessary to sustain animal life and energy,



approval of a dozen agricultural stations, besides diplomas from State fairs. It is now manufactured in Canada, as well as at Cochranville, Pa., and even in these dull times for stock has been sold all over the world.

### Last Year's Meat Markets.

Mr. Thos. Borthwick, Central meat market, London, thus reports upon the live stock and meat trade for 1896:

"Take it from beginning to end, the year 1896 stands out prominently as the worst both in live stock and dead meat; and losses to the dealers and consignors have been very heavy, what with high freights and buyers bidding against each other to fill the space taken between January and June. The River Plate sent us large numbers of cattle and sheep, and though the bulk were fairly good quality, it was nothing unusual for the carcasses to make only 2½d. per lb. for beef and 3½d. for mutton, and in some cases 1½d. per lb. for good wholesome beef. This entailed a loss of from £5 to £7 per head on cattle, and from 5s. to 7s. on sheep. Since June much smaller numbers have come, but in few cases paying their way; then from the States and Canada, especially during the latter half of the year, supplies have been heavy, and on the whole of good quality from the States, but prices have been ruinously low until the second week of December, when numbers fell off, and a healthy trade has continued since at paying prices. Home stock has also ruled very low, feeders getting very little for keep. In chilled meat we have had plenty,

The substances of which plants are composed may be grouped under five heads, as follows:

1. Water.
2. Ash, or mineral matter.
3. Protein (sometimes spoken of as "proteids," or "albuminoids.")
4. Carbohydrates (also called "nitrogen free extract.")
5. Fat (sometimes called "ether extract.")

It is impossible to estimate accurately the value of the water which foods contain. In many cases the water seems to increase very materially the feeding value of the fodder, which fact is strikingly illustrated in the case of pasture grass and roots; and, apart from this feeding value such succulent fodders have a beneficial effect in keeping the animal system in good working order.

Ash, or mineral matter, is used in the formation of bone, and is therefore of importance in feeding young growing stock. The high value of oats in feeding young animals is due to the fact that oats are especially rich in mineral matter, and are therefore good bone formers, while it is well known that an exclusive grain ration of corn is injurious to young stock, simply because corn is deficient in ash.

Protein contains nitrogen, and is concerned in the formation of flesh, muscle, blood, milk, hair, wool, horn, etc., and probably to some extent fat. It may also supply heat and mechanical force, enabling the animal to do work. By work is meant any kind of muscular exertion.

Fat undergoes combustion in the body, producing heat which is necessary to create mechanical force. It is also stored up in the body as fat, to be used when required. Thus fat animals can live a long time without food, the fat that has been stored up supplying heat.

# Cures

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**Cures** of Scrofula in severest forms, Salt Rheum, with intense itching and burn-scald head, boils, pimples, etc.

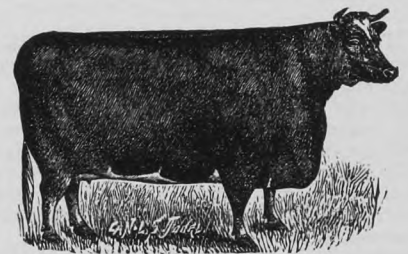
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### J. E. SMITH

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Carbohydrates are concerned chiefly in the production of heat and fat. They form the largest part of vegetable foods.

If an animal is fed on protein alone, it cannot live long, but will become sickly and die in a comparatively short time. Protein is also more expensive than carbohydrates, and therefore it is a wasteful practice to feed more protein than is necessary. At the same time, in order to obtain the best results, a certain amount of protein is necessary, as is also a certain amount of fat; and the object of the feeder is to compound a ration which contains these three substances (protein, carbohydrates and fat) in the most suitable proportions. Such a ration is called a "balanced ration."

The relation which the digestible protein bears to the digestible carbohydrates and fat is called the "nutritive ratio" of a fodder. Thus, if we say that the nutritive ratio of a fodder is 1:7, we mean that there is one part of digestible protein to seven parts of digestible fat and carbohydrates.

The value of fodder depends upon its composition and its digestibility. No fodders are entirely digestible, though roots and milk are very nearly so. We cannot therefore determine the nutritive ratio of a fodder from its composition only, but we must know what portion of each constituent is digestible.

The only basis upon which the different nutrient is can be compared is in respect to their capacity for producing heat. In the production of heat fat has about 2.2 times the value of carbohydrates; therefore, if we multiply any given amount of fat by 2.2, the product will represent the amount of carbohydrates which the given amount of fat is equal to. By some the fat is multiplied by 2.5, and by others by 2.29, or 2.3, but the factor 2.2 may be regarded sufficient for all practical purposes. If we wish to find the nutritive ratio of a fodder, we must first find the digestible nutrients which it contains.—Ontario Dairy Bulletin.

### Ranching on the Assiniboine.

The Russell Chronicle draws attention to the way in which Messrs. Ball and Moyle have turned to account the advantages offered by the nutritious herbage of the upper Assiniboine country. They have selected a well-wooded, well-watered but unsettled district on the shores and in the valley of the Assiniboine, far up the river, towards Fort Pelly, where there is abundance of grass and plenty of hay. A large number of horses and cattle are kept and provided with food and shelter in winter, but run at large without attendance during the summer. The herds assemble in the evening where fires are provided to afford protection from the flies. Besides what are raised, many young animals are purchased every season, and on the rich pastures of the wild district the cattle increase in size and value very quickly. Last season four thousand dollars worth of fat steers were sold. There are thousands of places equally well suited for stock raising in the unsettled portions of the British Northwest, and no doubt in time the opportunity will be taken advantage of, as hay, pasture and wood are abundant in the wild districts. This is a good example of the way in which men of resource can turn to profit what would otherwise go to waste. For the right kind of men this same country can hardly be surpassed.

The Calgary Herald reports that Mr. Wm. Rutherford, at one time manager for the C. C. C. Co. at Swift Current, has just died at Glasgow, Scotland.

### Thoroughbred Blood.

A well-posted writer on horses in Illinois says that outside of draft breeds the best horses are the direct descendants of the thoroughbred, and carry more of that blood than any other known strain. This is especially true of the French coacher, which is found to nick so well with American trotting mares, and whose lineage is thoroughbred in every cross. The same is true of the German coach horse, the English hackney, the Cleveland bay, and the Yorkshire coach horse. The thoroughbred has been the recognized source of improvement for over half a century in Europe, and for over 100 years in Great Britain. He has given his descendants a share of his good qualities, and his blood is so potent that it shows to the third and fourth generation. The Englishman has bred his draft mares to a thoroughbred stallion and called the progeny a coach horse. He has bred his hunters and hacks from the thoroughbred and found that the more of his blood they had the better they were, and the greater their value when put in the market. It is very apparent, therefore, that the quality bred into the thoroughbred to make him more valuable for racing purposes has been used to improve all other classes of horses, and in that way has proved a great benefit to the horse interests of this and other countries.

Franklin has just lost a grand old horse, whose pedigree it might be interesting for some of the sticklers for pure blood to hunt up. Big Sam, says a correspondent of the Neepawa Press, was perhaps the finest work horse that ever came to this province. When steam threshing was in its infancy in this part of the country Sam was as well and favorably known to the residents of three municipalities of Beautiful Plains as almost any man in them. He was brought to this province in the early eighties from near Brockville, Ont., and was purchased with his mate by Kerr Bros. for the respectable sum of \$640. He stood 17½ hands high, weighed at his best 1,930 lbs., and, measured by the standard, he filled the bill of an almost perfect horse. In the 20 years of his life he never was sick an hour, never was unfit for work for a single day from any cause whatever. In his prime he never was hitched to a load that something did not come, neither was he ever passed on the road. Numerous instances are related of his prodigious strength, but one will give some idea of it. With his mate he drew up grade a 30-h.-p. boiler and engine weighing over nine tons.

Jos. Lawrence & Sons, of Clearwater, Man., write: "We think The Farmer the greatest medium for reaching the right sort of people. The two insertions of our advertisement in your paper brought us 420 applicants for stock. We have sold everything we have to part with, and in fact more than we should have sold. We are off to Ontario to try and get some of the best stock down there to fill up some of the gaps made in our herd. Your paper must have a wonderful circulation, as we have been asked to supply over 300 bulls and about 200 heifers. Kindly inform the readers of your paper that have been disappointed in not getting stock from us, that we are going to Ontario about Feb. 15, and any parties wishing us to purchase or bring out young stock about March 10, we shall be most happy to do so, as we intend looking over all the best herds in Ontario. Our charges will be for freight as far west as Regina as follows: Bull, under one year old, \$15; over one year old, \$20.

### Band, Herd and Flock.

Over one hundred head of the Seeman ranch cattle were recently dehorned.

A hundred thousand sheep are now being fattened in the Minneapolis stock yards. Bran is a leading article of food. The Pillsbury company recently shipped a train load of bran to Germany.

There is an unvarying law in nature that governs all growth and development in both the vegetable and animal kingdoms, and one of the prime conditions is that all development is the effect of nourishment.

According to Rothamsted experiments the butcher's carcass of a fat ox will weigh about 60 per cent. of the live weight; of a sheep, 58 per cent.; of a fat porker, 83 per cent. These figures will vary slightly according to the amount of fat the animal has taken on.

John Barron, Carberry, has sold five Shorthorn bulls to Mr. Pearson, rancher, Maple Creek. It would be difficult to find anywhere a better stamp of bull as a sire for beefing stock than the 4-year-old Russell, now at the head of Mr. Barron's herd, and from which these have been descended.

The good-natured hogs are the most profitable to feed. A pen full of quarrelsome animals will not lay on fat so fast as those which go in for eating instead of fighting, and keep happy and good natured. Select the young pigs at feeding time, and pick out the hungry, but good natured ones.

With all animals, whether feeding for growth or to fatten, it is the amount of food which is digested and assimilated which is of benefit. In feeding to secure the best results this must be kept in mind. Here comes in the advantage of grinding or cooking the food for the hogs. Soaking the grain softens it; grinding makes it easier to soften.

The supply of beef and mutton per head of the population in the United Kingdom in 1896 was: Home production, 59.9 lbs.; imported, 27.4 lbs.; total, 87.3 lbs. While the total supply per head is the highest in the last decade, the percentage of home production has in that period been decreasing. Of the 27 lbs. of meat imported for each unit of the consumers only 9 lbs. were in a frozen state.

Over-forcing for prize-winning contests appears to be a frequent source of danger to draft stallions especially. Two of the most promising Clydesdales in Scotland have died within a few days of each other. Prince of Fortune, 1st in a great class of stallions, at Glasgow last year, as a 4-year-old, and very nearly winner of the Cawdor cup, died at Christmas, and a few days afterwards Prince of Erskine, a son of Prince of Albion, and an early winner of high honors, also died of inflammation. He was looked on as a very healthy horse and was in training for the Cawdor cup, one of the highest honors open to the Clydesdale breed.

The Clay Robinson Live Stock Commission firm, of Chicago, are strongly urging their clients to hold on to all the cattle they can feed, on the almost certainty of improvement in price within the next few months. They say there is every probability of the present excellent demand from exporters and eastern shippers for fat steers continuing, and we anticipate an active market right along, although we are not looking for higher prices. On the basis of present rates feeders can certainly make money by holding and fattening, and we confidently think there is no good reason to fear any material decline in prices.

**Band, Herd and Flock.**

The horse is not a creator of power, but simply a living machine. Power is put into the locomotive by fuel; into the horse by good food. Neither can he supply one particle more power than is furnished him. No machine better repays thorough care than the horse.

George E. Breck expresses in the Rural New Yorker the opinion that the best cross to go with any other breed of sheep whatsoever is the Shropshire, and he advises beginners in mutton or lamb breeding to procure first of all a Shropshire ram to cross with common ewes, and then grade the flock up with the same breed. The higher the grade the more valuable the product, he says.

Continuous breeding from young sows, as might be expected, weakens their vitality and diminishes their size. But it does not follow that young sows ought not to be bred at all, only that their progeny should not be used as breeders. There are too many advantages from early breeding to give up the practice entirely. The sow put to breeding early lessens the danger of her becoming too fat for breeding later. A pure-bred sow not bred as soon as she is old and mature enough to come into heat will soon become so fat as to be worthless as a breeder. As a matter of fact, the coarse-boned breeds, which do not fatten easily until old, are for this reason the best breeders, and turn off the finest litters when crossed with pure-bred mates.

The Argentine Republic is now turning out a very superior quality of jerked beef, an article for which it has always had a special reputation. Hot air is generated in a furnace, and then passed on to a large chamber, in which the beef to be cured has been hung. Through this chamber the hot air is carried to the outer atmosphere, bearing along with it the sap from the meat, which in 42 hours is completely dried without being robbed of any of its natural flavor, or in any way discolored. The beef is first cut into strips and dipped in salt brine before being hung in the dry air chamber. Of course, meat prepared in this way is very much lighter and easier of transportation than by any other possible preparation. When wanted for use it is steeped in pure water and then cooked in the usual way.

J. E. Smith, Brandon, Man., writes The Nor'-West Farmer as follows:—It is with pleasure I inform you that my advertisement in the last three issues of your paper has brought me numerous enquiries for Clydesdales, Shorthorns and Herefords, which have resulted in some very satisfactory sales. I consider your journal not only up to date in all matters relating to agriculture, stock raising and all farm topics, but also a first-class advertising medium. My Clydesdales and Shorthorns, both males and females, are coming through the winter in capital shape, not loaded with flesh, by any means, but at the same time, in a healthy, thrifty condition, and just in the right shape to go on and do well in the future for those who may purchase them. As probably as many young animals are stunted by over-feeding as by not sufficient feeding, my aim has always been to have animals that would give satisfaction as breeding stock, and not to impair their usefulness by over-fitting for the show-ring, as will be seen by my advertisement. I am not looking for fancy prices, but will give good animals, with good pedigrees in every class, so that every farmer can afford to improve his stock.

Others have found health, vigor and vitality in Hood's Sarsaparilla, and it surely has power to help you also. Why not try it?

**Sweetness and Light.**

Put a pill in the pulpit if you want practical preaching for the physical man; then put the pill in the pillory if it does not practise what it preaches. There's a whole gospel in Ayer's Sugar Coated Pills; a "gospel of sweetness and light." People used to value their physic, as they did their religion,—by its bitterness. The more bitter the dose the better the doctor. We've got over that. We take "sugar in ours"—gospel or physic—now-a-days. It's possible to please and to purge at the same time. There may be power in a pleasant pill. That is the gospel of

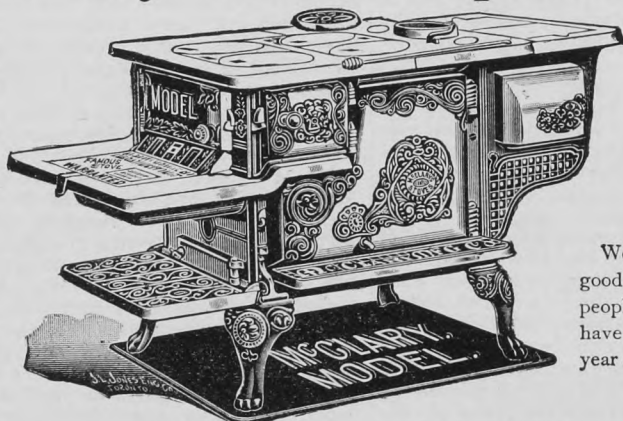
**Ayer's Cathartic Pills.**

More pill particulars in Ayer's Curebook, 100 pages.  
Sent free. J. C. Ayer Co., Lowell, Mass.

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Will receive the best of attention, and net you the "TOP NOTCH" in prices, if consigned to

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Pork Packers and Wholesale Commission Merchants.

**Fifty Years Experience**

We must make good stoves or the people would not have bought them year after year.

"MODEL," FOR WOOD—2,000 SOLD ANNUALLY.

**The "Model" Wood Cook**  
... is the **Farmer's Stove.**

**THE McCLARY M'F'G. CO.**

LONDON, MONTREAL, TORONTO, WINNIPEG, VANCOUVER.

If your local dealer does not handle our goods, write our nearest house.



## GARDEN AND FORESTRY.

## Mr. MacKay on Windbreaks.

Mr. MacKay, Indian Head, writes:—In your Christmas number "Subscriber," Reston, Man., asks for information regarding time to sow maple seed, depth to sow, distance to have windbreaks from buildings, etc.

The answer given to these questions in the same issue are not applicable to the Northwest, and as you have many readers in the Territories, please permit me to state, briefly, my experience in the matter.

In answer to "When Should Maple Seed be Sown?" the reply is given that the fall is the best season. This is all right in theory, but entirely wrong in practice. Maple seed will, as a rule, germinate in from fifteen to twenty-five days, and if sown in the fall the plants will be above ground from May 1 to 10 following. Eight years out of ten we have hard frost after May 1, which means the destruction of every seedling above ground at that time.

Maple seed, to be safe, should be sown about May 10. Three-fourths of the seed will germinate the first spring, and often the entire lot will do so if the seed is good and has not been sown too deep. Two inches, as stated in reply, is about the correct depth to sow seed, but in no case should it be sown deeper.

In regard to windbreaks, the reply given is 'to have them thirty or forty feet wide.' This, also, I think quite a mistake. On the farm here we have windbreaks from one hundred feet wide down to one row of trees, and for all practical purposes, the one row is the best. For a windbreak around a farm, one row of seeds sown thickly, or young seedling trees planted one foot apart, will make, at much less expense, a better windbreak than one of greater width. Where windbreaks consist of more than two or three rows, the trees are almost sure to be broken down by the accumulation of snow. Where as but one, two or three rows the snow drifts through and lodges out or inside, as the case may be. A more unsightly thing in the spring than our forty, fifty and one hundred feet wide windbreaks broken down by snow cannot be imagined.

For a windbreak around buildings two rows at most, three feet apart, should be sown or planted. The two rows will be found sufficient to break the force of wind from the buildings, and all snow drifts will be inside the two rows. From fifty to one hundred feet should be between the hedge and buildings.

"Subscriber" asks whether or not maples do better if transplanted. As this has not been answered, permit me to say that we find very little difference, if the trees are transplanted when small. A hedge sown will grow somewhat faster for a few years than one transplanted, and a single tree that has not been disturbed will do the same, but those transplanted make the best and nicest trees in the end.

"Subscriber" also asks if tops and roots should be trimmed, and if the roots should be transplanted deeper in the ground than where they formerly grew. The top roots only of a maple tree should be cut away. Trimming the tops very much retards growth for at least two years. If trees are planted after the leaves have appeared, it is necessary to cut back to correspond with the roots, but this is greatly against the tree, which should, if possible, be transplanted before the leaves come out. If the top roots are about two inches below the surface, the tree is planted about right.

Mr. MacKay has had a larger experience in this field than most men, and all he has to say is well worth hearing. But

a good many men further east have recommended fall seeding, as objected to by Mr. MacKay. In the Nor'-West Farmer for May, 1894, Wm. Laughland, Hartney, says: "If you sow in spring the seed does not germinate freely, and some of it will lie in the ground for a year before showing up." On the next page, J. J. Ring, Crystal City, says: "Either spring or fall will do to sow the seeds." If the seed were stored in a cellar among damp sand all winter, and sown early in May, all the objections made to spring sowing would be obviated; but when the seed is kept all winter dry in a sack, and not moistened before being put in the ground, the objection taken by Mr. Laughland will hold good. Prof. Hanson, of Brookings, says: "Lay the seed two inches deep on dry ground in the fall; cover with sand or straw all winter, and sow early in spring. Frost does not hurt the seed, and the moisture keeps it in the best condition for germinating at the right time."

The Forest Tree Planters' Manual, issued by J. O. Barrett, Secretary of the Minnesota State Forestry Association (10th ed.) says: "The seeds of ash and box elder are liable to be injured by drying, hence the safest way is to plant them late in the fall, and more seeds will thus sprout. If spring planting is preferred, the better to escape early frosts, soak the seed till well swelled and ready to sprout. A yet better way is to spread them out thin just before winter sets in, on a smooth dry spot, and cover with sand or litter and keep them there frozen and moist." This plan of seed storage may be ruined by mice, but is otherwise most in accord with nature's methods.

The latter part of Mr. MacKay's letter shows the importance of bringing out more sharply than any of us have yet done the distinction between a snowbreak and a shelter belt. A man who begins to plant on a naked prairie naturally wants some better shelter for himself and his stock and crops than can be furnished by a single or double-rowed line of bushes, which, as all will agree, is good enough to break and hold all the snow that flies. On Indian Head itself crops were every year liable to be blown out of the ground till the growth of shelter belts put a stop to it. Maples are, and have been broken by piled-up snow, and in cases where pains were taken to trim them up into tree form, the injury was greatest. This difficulty A. P. Stevenson proposes to meet by having an outer row as a snowbreak and a blank space sufficient to hold the bulk of the snow; then the shelter belt proper. This is the plan now shown by H. Nichol at Brandon, which quite prevents more snow gathering in the shelter belt itself than can pile up without injury to the limbs of the trees. Trees of the willow variety are more flexible and much less liable to split and break under snow pressure than any variety of maples. Why should we not at once make up our mind that to get the result we are reaching out for, a shelter belt is not all we need, and a snowbreak far short of the shelter required by the farmer on an open prairie, and decide, as far as we can, to use both taking Mr. Nichols' lines to work on?

The argument of Mr. MacKay in favor of say two rows, three feet apart, as a windbreak to catch snow, will meet general approval, but that would not be shelter belt. Trees planted as a shelter belt and trimmed up are very liable to break under snow, as objected to by Mr. MacKay. Mr. Stevenson suggests willows as the best windbreak, then an interval to hold snow, then the shelter belt proper, but Mr. MacKay's experience on an open prairie is more instructive than experience gathered in a low and comparatively sheltered place. The Minnesota Manual of

## Horse Owners! Use

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## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.

1746

## To Stockmen and Breeders.

## LITTLE'S PATENT FLUID NON-POISONOUS SHEEP DIP AND CATTLE WASH.

For the destruction of Ticks, Scab, Lice, Mange, and all Insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc.

Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc.

Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy and healthy.

The following letters from the Hon. John Dryden, Minister of Agriculture, and other prominent stockmen, should be read and carefully noted by all persons interested in Live Stock:

## "MAPLE SHADE" HERDS AND FLOCKS.

BROOKLIN, ONT., Sept. 4th, 1890.

DEAR SIR,—I cannot afford to be without your "Little Sheep Dip and Cattle Wash." It is not merely useful for Sheep, but it is invaluable as a wash for Cattle, etc. It has proved the surest destroyer of lice, with which so many of our stables are infested, I have ever tried; it is also an effectual remedy for foul in the feet of Cattle. I can heartily recommend it to all farmers and breeders.

JOHN DRYDEN.

17 Gold, Silver and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world.

Sold in Large Tins at \$1.00.

Special terms to Breeders, Ranchmen and others requiring large quantities. Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to

ROBERT WIGHTMAN, Druggist, Owen Sound.

Sole Agent for the Dominion. 1874

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Montreal—Royal Mills.....	2000 bls.
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Total Daily Capacity, 7,500 Bls.

Dealers in all kinds of Feed and Coarse Grains.

A large supply of Oatmeal, Cornmeal, Buckwheat Flour, Rye Flour. Salt always on hand.

Ask for Ogilvie's Celebrated Brands Flour.

1849F

Tree-planting calls for a double row of willows; then 20 to 25 feet to hold snow, then the true shelter belt. Will others who have gone through the same difficulties contribute their experience?

There should be a good many readers of *The Farmer* who have gone through experience enough, both in seeding, planning and planting, to make what they have done worth telling. We offer a year's subscription to *The Nor'-West Farmer* for the paper, short or long, that gives, as the outcome of past experience, the best hints for seeding and laying out a shelter belt, in which is combined the possibility of both snowbreak and protection from winds. Let it be noted before we close that natural bluffs of poplar, combined with small scrub, never appear to break down under snow, as does the box elder, on which up to the present we have placed our greatest reliance for such protection.

### Trees and Fruits.

*Notes from Mr. Bedford's recent Addresses.*

They had made exhaustive experiments with apples on the experimental farm, and out of the 100 varieties tried they had not one decent apple remaining. However they had found one variety, the Siberian Crab, that stood the climate admirably, and this year they had nine trees of these loaded with fruit. This showed what really could be grown here, and established a basis for them to build upon. He was confident of ultimate success, but it might be years before a variety could be secured. They have a hundred of those Siberian Crabs planted in the east, and are cross-fertilizing with other hardy varieties. Out of this number they are pretty sure of striking the objective point. It may take 20 years, but it took 20 years to get the Northern Spy for Ontario. Reverses should not discourage, for the attainment of their object was certain. This Siberian Crab is just as hardy as our native maple, the buds never freeze.

#### PLUMS.

Imported varieties of plums are a failure, but the native varieties are doing well, and some really fine fruit was grown on native trees. They had selected the very best kinds of natives, and were grafting these, hoping thereby to get a new and hardy variety. They had a great number of them growing on the farm, and would send out four or five thousand for distribution at as early a date as possible. Some of the native varieties were all that could be desired either for eating or preserving, while others were fit only for preserving.

#### CHERRIES.

The imported varieties of these were no more of a success than the plums. He had never succeeded in fruiting any of them. But he was confident of getting something suitable by grafting and cultivation. They are at present cultivating the little native sand cherry, which grows on little bushes, and the results so far were very encouraging. Had trees four or five feet high, and this gave a basis to work upon. He would graft these upon the native plum.

#### GOOSEBERRIES.

They were highly successful in growing the smaller fruits, such as gooseberries, and did not believe there was any excuse for the man who did not grow enough for his own use. This year a small white insect gave them a great deal of trouble, destroying many of the imported varieties. It does not affect the native varieties at all. Mr. Bedford considers the native

Sandhill Gooseberry the best variety. It is a prolific bearer, it grows well and the fruit is large and smooth. He stated that it is just as good in every way as the famous Houghton.

#### CURRENTS.

This was the branch of fruit culture of which he was specially proud. The finest currants he had ever seen were grown on the farm this past season. The crop was phenomenal, and the fruit could not be excelled. The best variety of red currants is Fay's Prolific; the best black variety is the Black Naples. The White Grape is also a fine variety.

#### RASPBERRIES.

They had tested a number of varieties but he considered the Philadelphia the best.

#### HOPS.

The native hops were much superior to anything yet imported. The yield was five times as great.

#### RHUBARB.

This is something which can be made a great success of in this country, but selection of variety had a great deal to do with it. There were some kinds which gave a great yield, but the quality was bad, the stocks being coarse and sour to an extreme. He had pulled 40 lbs. from one root of one variety, while off a root of another kind right alongside he got but one pound. This showed the necessity of selection. The "Victoria" is a grand variety, being tender and juicy, as well as productive. Mr. Bedford says they grow it there all winter, simply by placing a root in a barrel of earth in the cellar in the fall. They had fresh rhubarb pie by this means two weeks ago; and it is within the power of every farmer to have this delicacy in the winter time, simply by this little work.

#### BEANS.

The lecturer stated that a new and exceptionally fine variety of white beans had been discovered this year. He had great faith in it, and intends sending out a lot for sample seed this year.

#### ORNAMENTATION.

On the farm Mr. Bedford stated they have 226 varieties of trees and shrubs growing. They were testing these to find the best varieties of shade and ornamentation trees. The Russian Poplar is a fine variety for hedges or shade trees because it is extremely hardy and a very fast grower. They had planted some seven years ago, and now they are over six inches thick. They are best adapted to high or light land. The Cottonwood is better for low places. But of all trees for shading purposes the elm is his favorite. It is doing remarkably well, being just as fast a grower as the maple, and being one of the longest-lived varieties. There are elms growing on Boston Common to-day that were planted there by George Washington. This was the tree he would strongly advise to be used for avenues and street shade trees. It must be transplanted in the spring before the leafing, or it will not grow. This is something important to note. Mr. Bedford has 10,000 little elms in the nursery row on the farm, which he procured from the Indians, and was getting them in shape for general distribution throughout the province. They had to be transplanted twice before they had enough fibrous roots to ensure certainty of growth.

The spruce he considers a splendid variety for ornamentation. Great care must be exercised in transplanting them. All the soil around the roots must be brought with them or the work is in vain. They should be planted deep, and only surface soil used. Indeed, only surface soil should

be used in planting any kind of trees, and where there is alkali it should be carefully shovelled out and replaced by the surface soil.

### Planting Cuttings.

In last month's *Farmer*, under "Small Fruits," was given Mr. Stevenson's method for planting cuttings from currants in spring. He makes a hole with a dibble, and sticks in the cutting with all buds on, but cautions the planter to be sure and have the cutting made firm at the lower end. Prof. Budd, of Iowa, says he makes sure of this by cutting a trench four or five inches deep, one side at an angle. In this he sticks the cuttings, pushing the bottom end into the soil, covers, and then beats the earth firmly on the cuttings, leaving the top loose. This plan, if taken for fall-planted cuttings, is followed by a good mulch when winter comes on. Budd's plan may prove handy for some people.

The smallest tree in Great Britain grows on the summit of Ben Lomond. It is the dwarf willow, which is mature when it attains the height of two inches.

The cut-leaved birch is a sport from the native birch of the Amoor in Russia. It is budded on natural seedlings, and cases are not unknown in which, through some want of harmony between the stock and the budded growth, disease has crept in and the beautiful tree has withered in mid-summer. This is the most beautiful shrub perhaps that has ever been introduced in Manitoba, and but for this risk it thrives well.

The best way to plant a tree depends a good deal on the nature of the soil it is put in. If naturally gummy, it will be sure to bake if the ground is at all wet. As a rule a little moisture in the hole the tree is set in will do good, and the roots should be spread out as far as they will reach. Loose earth, fairly damp, may be spread on the roots, and then tramped down enough to firm it. Damp enough to take good hold, but not so wet as to bake, is the ideal condition of soil for a new-planted tree. Soil in this condition will bear tramping, and get no harm. If wetter, the ground is liable to get baked, especially if tramped down.

### Butter Makers Believe In It And Use It.

Wells, Richardson & Co.'s "Improved Butter Color" is used in four out of every five creameries in Canada and the United States. Please note and give attention to the following points: "Improved Butter Color" is as clear as crystal and contains no mud.

Creamerymen and buttermakers generally will kindly bear in mind that the last drop in a bottle of Wells, Richardson & Co.'s "Improved Butter Color" is as clear and strong as the first; no sediment, no dirt, no mud.

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1867

#### CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing, with stamp, naming this paper. W. A. NOYES, 820 Power's Block, Rochester, N. Y.

1842



## VETERINARY.

## General Care of Stock.

Mr. R. A. McLoughry, V. S., has for some time back been supplying the Elkhorn Advocate with very useful and interesting papers on stock topics from a veterinary point of view. The following gives a good example of his method, and we may draw further on his work. Speaking on the general care of stock, he says:—

In this the ultimate object is to avoid disease and to obtain the greatest possible gain for the money expended. To this end the avoidance of disease is possibly most important for me to discuss here. However we may differ as to the principles that should govern the feeding of stock, we are all agreed that the presence of disease is a direct loss to the owner. The causes of this disease clearly divide themselves into predisposing, exciting and proximate. With the first and second of these I intend to deal almost exclusively. For when we know what conditions are calculated to produce disease and avoid these, we go a long way toward having healthy stock.

Predisposing causes of disease differ from a predisposition to disease. For example, a horse that is in no way inclined to weak lungs may be driven to exhaustion, overheated and allowed to cool off too rapidly, the result being inflammation of the lungs. The over-driving and overheating predispose to disease, and are called predisposing causes. While, if the lungs had already been weak, we would say there was a predisposition to disease. Predisposition to disease is constitutional and generally hereditary. Among predisposing causes of disease are the following: Influence of age. This, of course, is better seen in mankind than in animals, but it has its effect just the same. In the dog the period of "tooth getting" or dentition renders it liable to convulsions, paralysis, indigestion, etc. Again, distemper in the horse is generally confined to young animals. Then also there is a whole list of diseases attendant on the period of getting teeth, a fact I suppose well recognized by every one who has raised a colt. The bones and joints of the young are also more liable to disease. As old age approaches animals are more liable to diseases arising from tumors, degeneration of organs and tissues,—the heart, liver, etc., undergo fatty changes—digestion is impaired; the joints become stiff and the bones brittle. So it is seen that middle life is the period most exempt from disease.

Peculiarities of Breed.—Grease legs is seldom seen in race horses, but is common in heavy limbed beasts. Roaring more often accompanies a certain shape of the neck. High bred horses are more liable to nervous diseases than those of a lower breed.

The Effect of Color.—White horses are very liable to a certain kind of tumor not seen in those of dark color.

Species.—The horse while liable to glanders resists diseases that cattle and sheep are liable to. Barnyard fowl are not affected by glanders, or black quarter.

Temperament.—The sanguine temperament implies an activity of circulation, quickness of movement and nervousness. The opposite of this is the lymphatic temperament. Animals (and people) of sanguine temperament are more liable to all kinds of inflammations, that is, they are more liable to inflammation of the lungs, kidneys, etc., and the effect is more disastrous. Cattle and sheep possessing lymphatic temperament are more liable to dropsical swellings, as are also horses of this temperament.

## DON'T ASK

Father or mother to do it, write a post-card yourself, and you will have by return mail nice catalogues all about **Cream Separators** and **Dairy Supplies**. After you have read what's in them we know you can talk the old folk (whose only fault is that they believe the old way is the best) into buying a "**De Laval**" or "**Butterfly**" Cream Separator, and when you have it, they will thank you for writing to

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WINNIPEG.

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1857

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## POULTRY.

### How to Mate, Breed and Care for Bantams for Pleasure and Profit.

*By W. W. Clough, Medway, Mass.*

A Bantam is supposed to be the exact reproduction on a very small scale of the varieties from which they are descended. A Cochins Bantam is supposed to be a little Cochins; a Rose Comb Bantam a little Hamburg; a Game Bantam a diminutive Game. While they are supposed to be like the large varieties from which they have descended, still they are not in all respects. The standard requirements are in some breeds slightly different in the Bantams than in the large varieties. These differences will be explained under the description of the various breeds and varieties.

The latest Standard of Perfection recognizes 14 varieties of Bantams besides the Game. These include the Silver and Golden Sebrights; Buff, Black, White and Partridge Cochins; Booted White; three varieties of Japanese; Rose Comb, Black and White; Plain and Bearded White Crested White Polish. There are nearly as many more varieties which are not yet recognized. Some will probably be admitted at the next revision of the Standard, while it will be years before others get in, if ever. The Light and Dark Brahma have a fair start. Mr. Zimmer has originated the Buff Polish, and is now at work on the Golden Bearded variety. The Buff Polish has quite a start, and when through scientific breeding a fair per cent. of good even marked birds can be relied upon, they will in the writer's opinion be one of our leading varieties of Bantams. Rumples and Silkies, while not classed among Bantam varieties, could be justly placed among the list, they being as small as many of the Bantams. It is wonderful how the little Bantams have gained in popularity during the past few years. Pheasant breeders use the Bantam for setting, preferring them to any large fowl. I have sold very many Buff Cochins hens for this purpose. The Cochins varieties are considered superior setters and mothers to any other variety of Bantams.

The profit derived from a flock of Bantams is more than any person not familiar with the little creatures would imagine, taking into consideration the time it requires for them to come to maturity, the small amount of food they consume, and the space necessary to accommodate the flock. A Cochins Bantam will lay as many eggs in a year as a Cochins or Brahma, a Sebright Bantam will lay as many as a Leghorn, Minorca or Hamburg. Twice the number can be kept, without crowding in the same space. They will consume only about one-third the amount of food, and will lay an egg about three-fifths the size of a large fowl. Taking everything into consideration they will be found to yield a better profit than the large varieties. Of course their eggs are not saleable at full prices, but can readily be marketed at over one-half the going price. The only drawback is the poultry, they are not saleable on account of their size, still they are extremely fine eating, and by killing two at a time will furnish a meal for a good sized family.

Mr. H. S. Babcock, who has bred Bantams for many years, writes as follows:—"Bantams are peculiarly adapted for pets. Their small size is of great advantage in this respect. A pet bird is one that should be able to be handled easily. A large fowl, simply because it is large, cannot be easily

handled, but a Bantam weighing a pound or a pound and a half can be held on the outstretched hand without weariness. The small size is of great advantage, therefore, not only in appealing to our affections, but in enabling the affections to be manifested without any weariness.

Bantams are easily tamed. This seems to be true not only of the fearless little Games, but of the very domestic little Cochins, and of all classes intermediate between these extremes. A pet bird should be, must be, one that can be rendered tame without difficulty, and Bantams, therefore, meet this very obvious requirement.

A pet bird, also, ought to be a beautiful bird. And Bantams are beautiful. They have all the rich coloring, exquisite and accurate markings, and beautiful and graceful shapes which make all domesticated poultry so attractive. And all these elements seem to be especially refined by the small size. We wonder that a little Bantam can possess all these qualities and therefore find our admiration sensibly increased.

Pets serve an important purpose in the economy of life. They meet a demand of human nature. They seem to interest and instruct youth and afford rest and recreation to the eye. The heart of man does not seem to be wholly satisfied by the love of his fellow man. He turns to floriculture and rejoices in the beauty of the blossoms his art has created. But flowers leave something to be desired. They can not show that they are appreciated. They can not come to meet one and can not turn upon him an intelligent eye as he caresses them. But a Bantam can. They show their appreciation of man's care and affection. They follow his footsteps with intelligent devotion. They rejoice his heart, not only with their great beauty but with the manifestations of their delight in his presence. They are as lovely as the loveliest blooms of earth, and they are alive. Living, breathing, acting, responsive, intelligent flowers they are, ministering to man's sense of beauty. And not only this, but also do they afford a great fund of amusement and interest by their amusing ways, their sense of pride, their domestic relations. In their daily search for food, their courtships, their gallantries, their challenges, their battles, their nesting operations, their brooding of the young and the like, they afford a study of absorbing interest. Nor are they to be despised even by the scientist, who can trace the rudiments of a language in their varied sounds, can follow back a habit to its original in the wild state, and can obtain from their study great light upon biological problems. Pet Bantams deservedly occupy a prominent place in life and are worthy not only of the place they now occupy, but of a much higher and much larger place. And it is probable that the place they deserve will, after a time, be bestowed upon them, and their numbers as pets be greatly multiplied."

(To be Continued.)

### Farmers Grade Up Your Poultry.

Every farmer who raises common poultry can put money in his pocket this coming season by investing \$2 to \$4 in a thoroughbred rooster. It is as plain as simple arithmetic. Buying a large vigorous male bird that out-weighs the present rooster you have by two pounds, is to add one pound of weight to every healthy chicken you raise next spring and summer. The saying that "the male is half the pen" applies in this case. The farmer need not pen up his fowls to make this true.

One pound of weight added to each of the few hundred chickens, raised each year

on many farms, is a big item. The quantity of marketable chicken meat is not only increased by this simple process, but also the quality, for the larger and finer looking fowl, alive or dressed, is easier sold, and at a better price.

The farmer who wishes to improve his finances will look carefully after just such matters as these. And where the farmer's wife is the "chicken man," she will do so. It is these strokes that count. Brute force does not hold its own on the farm as well as it once did. The thinking, planning, experimenting farmer is the one who now makes headway and finds life on the farm worth living.

Then there is the important matter of an increased egg-yield. This can readily be brought about with any common farm flock by introducing male blood from the great egg-laying breeds, the Leghorns, Minorcas, Andalusians, etc. A male of this kind, suitable for the purpose, can be bought at a low figure, and he will earn his homestead right several times over by the increased number of eggs his descendants will put into the basket.

Farmers, do not neglect such opportunities as this! With the prices of farm produce so low, it is wisdom for you to put your thinking cap on and be resolved to improve every chance to better your condition, to earn more money. Talk the matter over with wife.—R. P. J.

### Scoring.

There is considerable of an agitation going on at present in many poultry associations to have birds at shows win by comparison, in place of with the score card. There are many points in favor of both ways. The score card we consider good, if properly done by a good, reliable judge, but recent events, at many of the important exhibitions in the States, goes to show that a bird under one judge can score 92 and 93 points, and yet under another only two weeks later will only go 89 or 90, and this without any apparent reason, other than the judge's estimate. The entries at the Poultry Exhibition here this month will be scored by Sharp Butterfield, and, we trust, squarely and honestly done, no matter who makes the entry. We want the poultry breeders in the west to get down to real bedrock, and if breeding poor stock, let them know it, and build up their flocks. The best is none too good for the west. No doubt, at the annual meeting the question of scoring, or judging by comparison, will come up, and we trust it will be carefully considered.

In this issue we commence a series of articles on the much-admired class of poultry, "The Bantam Family," from the pen of W. W. Clough, one of the foremost breeders in America. In future issues we hope to accompany these articles with some good illustrations.

"The Feather," of Washington, D. C., reaches our table this month very much improved in its style. They have adopted the quarto size, similar to *The Farmer*, which gives them much better advantage to display the illustrations and advertisements. *The Feather* is one of the few poultry and farm journals printed in first-class style. Some of the journals catering to the farmers and poultry men seem to have the impression that anything at all will suit, and therefore issue papers that one would think had been printed with "apple butter," instead of good black printers' ink. Good paper and good printing is just as essential to a first-class journal as good articles; and these all combined will win merit for a journal, and command respect, as well as a good subscription list.



## Common Diseases of Poultry--- Simple Remedies.

BY THOMAS A. DUFF, TORONTO.

(Read at the Annual Meeting of the Ontario Poultry Association.)

It will be my aim in this article to endeavor to point out the causes of disease in poultry, the symptoms of the more common diseases, and the appropriate remedies.

### GENERAL CAUSES.

Nearly all poultry diseases are caused by one or other of these four things: Cold, damp quarters, want of cleanliness, or bad feeding; in other words by neglect somewhere. It is far easier to prevent than to cure. The great obstacle to contend with when birds are ill is that since they are covered with feathers, there are few symptoms to observe, and as you cannot tell what is the matter with them, very often you are compelled to prescribe very much in the dark.

In most of the fatal diseases there is a poisonous fungus growth in the blood. Fowls never perspire, by which means many evils might be thrown off; on the contrary, any evils that they have must be thrown off by respiration; and the result is that the great majority of poultry diseases are found in the head, throat and lungs, and therefore it is in these parts we must look for the symptoms of disease. Very often diseases are inherited; that is to say, the parent stock were themselves unhealthy and passed their disease on to their progeny. If any one should be so unfortunate as to have a flock suffering from inherited disease, I would strongly advise the butcher's block, and the obtaining of new stock.

To my mind, a certain class of inbreeding is also injurious—such as the mating of brother and sister. There are, however, many cases in which exposure or other active cause has occasioned in the most healthy birds an acute disease, presenting plainly-marked symptoms, the treatment of which should be well and thoroughly understood. Such cases are most amenable to judicious treatment, and fowls of great value may thus be saved, which, without this knowledge, might otherwise be lost.

The best doctors are those who watch their patients while well, and prevent sickness, instead of waiting for symptoms and then trying to cure them. These find their best remedies in the regulation of the diet. It is, therefore, important to remember that fowls require good wholesome food, clean water, and plenty of fresh air.

### VENTILATION.

Lack of proper ventilation is one of the commonest causes of disease. A great number of breeders run away with the idea that suitable ventilation has been secured when a ventilator is put in with its bottom opening flush with the roof. This is a great mistake. It is the foul or cold air we must get out of our building, without carrying off too much of the hot air; but when the ventilator comes only just through the roof, the result is that we carry off the bulk of the warm or hot air which, during the winter months, it should be our aim to retain in the building. The foul air is always at the bottom of the building, where also the air is coldest. Foul air can be best carried off by extending the ventilators downward to within eight or ten inches of the floor. This can be easily accomplished by making your air shaft of six-inch boards, and instead of bringing it only just through the roof, bringing it as directed to within eight or ten inches of the floor. The re-

sult will be that you will have the coldest air, which is also the foulest, carried off, and that the warmer air will be retained.

For use in summer, I have an opening cut in the ventilator shaft close to the ceiling, and when this is opened the warm air at the top of the building is carried away. The one ventilating shaft thus carries off the cold foul air in winter and the over-heated air at the top of the building in summer. We should utilize as much of the warm air as possible in winter, but care must be taken to see that it does not become foul. The ventilator, carefully watched and regulated, will prevent this.

### CLEANLINESS.

Next, it is of the utmost consequence that the premises are kept thoroughly clean and that the houses are disinfected at least once every two weeks with carbolic acid and water, in the proportion of two tablespoonfuls of the acid to a gallon of water.

### DISTEMPER.

To this disease all chickens are subject, and it may be contracted at any time, but more especially in the fall of the year. It is easily cured.

Symptoms—A listless, quiet disposition. During the first day there is a slight puff or fullness in the face. On the second day a white froth will be observed in the corner of the eye. There is also a decided loss of appetite.

Treatment—Isolate the fowl affected and place it in warm, comfortable quarters. Bathe the head and throat twice each day with a solution of vinegar and water in the proportion of one of vinegar to ten of water, and give a one-grain quinine pill every morning until the patient is cured. It is well also to put a little iron into the drinking water. Four days of this treatment will usually effect a cure.

### ROUP.

This is the second stage of distemper, and unless the affected fowl is a very valuable one, I would destroy that fowl and give close attention to the remainder of the flock. Thoroughly disinfect the poultry house and add iron to the drinking water. A little sulphur in the soft food will also result in good.

Symptoms—Swelling of the head to such an extent that the eyes are often closed, and a discharge from the eyes and nose which is very offensive to the smell. These discharges result in a thickened yellow pus.

Treatment—Press the nostrils until they are free from matter. Bathe the head and throat with the solution of vinegar and water the same as for distemper. Give a teaspoonful of castor oil and a one-grain quinine pill night and morning. Birds affected should be isolated and kept warm and dry.

### CHICKEN POX.

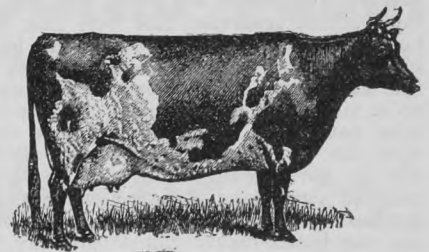
Symptoms—An eruption of the comb, face and wattles; in color, yellowish-white.

Treatment—Isolate all affected birds and disinfect the poultry house. Remove the crown from each eruption. This will leave a bunch of tiny spiles or spikes, which will bleed profusely. Take a common caustic pencil and rub each scab. Next day apply a mixture of carbolic acid and vaseline. In about ten days all scabs will disappear. Give the fowl a one-grain quinine pill every day for four days. Feed soft food, into which put chopped onions. If the eyes are closed so that the fowl cannot eat, make small pellets of food, dip them into milk, and you will find no difficulty in slipping them down the fowl's throat. Chicken pox is usually cured in about ten days, if taken in time, but if neglected it will carry off the entire flock. It is a very contagious disease.

(To be Continued.)

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## DAIRY.

## Home Butter Making.

By C. C. Macdonald, Dairy Commissioner.

(Article II.)

## DAIRY UTENSILS.

The most essential dairy utensils that should invariably be used on the farm for making fine butter are:—1st, the centrifugal cream separator (the best that can be got). In order to procure the best, have the agent of each machine that is in the market set their respective machines up at your farm, and let them compete for your patronage. Take the machine that does the best work. In this way there will be no difficulty in getting the best possible separator. 2nd, the smallest instrument used in the dairy work, but the one the butter-maker cannot possibly be successful without, i.e., the thermometer. Be sure to get one that is correct to a half degree in its reading. Never attempt to make a batch of butter without a thermometer; it is a never-failing guide all through the process of butter-making, from the setting of the milk to the working of the butter, and even to packing it should be used. Many persons (wise in their own conceit) say they can tell the temperature of any liquid by putting their finger into it. This, of course, is not so; the finger is not sensitive enough to tell the temperature of anything. Even the most experienced butter-makers cannot tell by the feeling of the finger. True, there is a good deal of butter made without the use of the thermometer to guide the operator, but where there is one case of success there are ten cases not successful. The thermometer must be in every dairy, in order to ensure success. 3rd, the cream ripening can. This should be a double can, having a space of about two inches between the outer and inner can. A cream can constructed in this way will enable the butter-maker to control all temperatures required for ripening the cream. The can should have two covers, one fitting the inner can and one fitting the outer can. 4th, the revolving churn. The churns vary in size all the way from No. 0 to 8, holding from 7 to 80 gallons. The churn should be sufficiently large to hold the cream from the herd at one churning. For a herd of 10 cows, a No. 4 churn would be sufficiently large, and for a herd of 50 cows, the largest hand churn should be used. 5th, the hand table lever butter worker. This utensil runs in numbers the same as the churns. 6th, the hand butter printer of one pound capacity. This utensil should be plain, without any frills or crimpings. The print of butter when formed should be smooth on the surface and square on the corners. 7th, the best quality of parchment, cut in sheets 8 x 11 inches, with the name of the farm and trade mark if desired printed in indelible ink in the centre of the sheet. The other utensils required may be enumerated as the cream strainer, the buttermilk strainer, the conical skimmer (if deep setting cans are used), and in that case cream cans sufficient in number to accommodate the milk of the herd; brushes for scrubbing, and last, but by no means least, a small set of scales and the Babcock milk tester. This machine should be in every dairy. It will work wonders for the dairyman. It will tell him what cows are giving a profit and what ones are being kept at a loss to his pocket. It also shows how much butter fat at 20c. per pound is lost in the skim milk and buttermilk. In short, it will put the dairymen of Manitoba on a basis of sound business principles, and show them how they can make

dairying pay and where their present losses now occur.

The above mentioned utensils should not cost the farmer over \$175 at the outside figures, and the quality of the butter that would be made by the employment of this plant would ensure a sufficient advanced price in at least two years' time to pay the cost.

## TREATMENT OF CREAM.

After the skimming is done the cream should be heated to a temperature of 165 degrees Fah. and cooled as quickly as possible. After to a temperature of 140 degrees Fah., whether the cream is produced by the separator or by the gravity system. This gives the butter a waxy texture, which is very desirable. The heating and cooling also purifies the cream, removing any foreign odors that may be in it. The heating may be done by setting a can containing the cream into a pot or kettle containing boiling water, on the stove, keeping the cream moving by gentle stirring during the time it is heating, so that all the cream will be heated in all parts of the can evenly. The thermometer should be held continuously in the cream while it is heating and cooling. The cooling may be done by putting the can from the hot water bath to a tube containing ice cold water, and stir gently until 40 degrees Fah. is reached. Ice in Manitoba is always a number one hard crop, and should be secured by every dairyman in the province.

## SETTING THE CREAM.

When sufficient cream has been collected for a churning, it is put through the process of what is called setting, for ripening or souring. This process consists of heating the cream to a temperature of from 60 degrees Fah. to 70 degrees Fah., according to the temperature of the room that the cream is kept in. If the temperature of the room can be kept steady at 60 degrees Fah., the cream need not be heated above 60 degrees Fah., but if the room is such that the temperature falls during the setting time, the cream should be heated to 70 degrees Fah. When the cream is heated to the desired temperature, if it is sweet, there should be added to it 5 per cent. of fermentation starter. This is used for the purpose of starting the cream to ripen or sour. There are many fermentation starters now in use, and they can be bought at different prices, but the most practical starter to use is the buttermilk from day to day. If the buttermilk is pure and free from any odors foreign to itself, I would rather use it, as it can be more fully depended upon. However, should the buttermilk at any time become tainted, it should not be used in the cream, as it will affect the flavor of the butter, and thereby cause havoc in the dairy. In case of the buttermilk becoming tainted, other milk or buttermilk of good flavor should be procured and used as a starter in the cream.

## TO MAKE A FERMENTATION STARTER.

A pure flavored starter can be easily made as follows:—Take the milk of one or two cows that are known to be in good health, take all the cream from the milk that it is possible to get off, take the skim-milk and heat it by means of the hot water bath to 165 degrees Fah., and then cool it down to 40 degrees Fah., keeping the milk from coming in contact with the surrounding atmosphere. While it is cooling, leave the milk standing at 40 degrees Fah. for about two hours, and then heat it up to 80 degrees Fah., and set it in a warm place, that is about 80 degrees Fah., and leave it for about 24 hours, when it will be found to be sour and perhaps thick. Break this thick milk up by pouring it several times through a cullender or straining dip-

per made for the purpose, and then add 5 per cent. to the cream. What is meant by 5 per cent. is 5 pounds of starter to each 100 pounds of milk from which the cream for churning has been taken. Should the cream be slightly sour when heated to the setting temperature, 60 degrees to 70 degrees Fah., as described above, no starter need be added, as the cream is ready for churning when slightly sour. Cream should have the consistency of white paint when the paint is ready for use, and it should not be any thicker. Very thick cream is hard to churn and a portion of it will adhere to the sides of the churn and is washed out with the buttermilk, causing considerable loss of butter fat.

The cream should be all ripened alike (souring is called ripening), so that it will all churn alike. No sweet cream should be added to the cream in the ripening can that is ready for churning, within 12 hours before churning time. Sour cream churns, if properly ripened, in about 30 minutes, while it takes usually one hour and over to churn sweet cream, and sweet cream must be put into the churn at 40 degrees Fah., while sour cream should be put into the churn at 58 to 60 degrees Fah. Hence, if sour and sweet cream be mixed and churned immediately, the sour portions of the churning will churn in less than half the time that the sweet portions will churn, therefore the butter fat contained in the sweet portions of the cream would remain largely in the form of cream in the buttermilk, while the butter fat contained in the sour portions would be churned into butter, consequently the large portion of the butter fat from the sweet cream would be lost in the buttermilk.

The cream should be stirred gently occasionally during the setting period, so that the whole bulk of cream will be evenly ripened. Twelve hours should be sufficient time in which to ripen the cream to the proper conditions for churning. Cream should not be held too long in order to get a big churning. It is better by far to make small churnings and churn often, as the flavor is very apt to become impaired by long standing.

The cream ripening can should always be kept tightly covered when containing cream. Remove the covers only when stirring the cream, or in adding cream for the churning, and cover immediately afterwards. When there is no cream in the can, it should be thoroughly cleaned and set outside in the open air, so that it may get a thorough airing and be pure and sweet for the next collection of cream.

(To be Continued.)

The twentieth, and probably the last, annual meeting of the Dairymen of Western Ontario was held at Brantford on January 19th. There was a large attendance, including prominent officials and members of all the sister organizations, as well as ex-Gov. Hoard, of Wisconsin. It turns out that the quality of the cheese made last year was not at all equal to that of former seasons. A new fungus, red rust, has crept in, and is doing serious damage, and altogether there was a feeling that the last year has done a good deal to tarnish the high reputation hitherto enjoyed by Ontario and Quebec for high class cheese. Carelessness in handling the milk, partly attributable to the low prices made of late, was to blame in some instances, but the general opinion was that unless special care is taken this year Canada is to slide down from the high place she has hitherto taken in cheese making.



# \$50.00 IN CASH PRIZES

We will give three prizes, 1st \$25.00, 2nd \$15.00, 3rd \$10.00, at the Winnipeg Industrial Exhibition, 1897, for cattle fed on

## New Century Horse and Cattle Food.

Up to date this food is beating all competitors. It puts on healthy meat quickly and saves ordinary feed.

Write us for particulars respecting the prizes.

## THE MARTIN, BOLE & WYNNE Co.,

WINNIPEG, MAN.

### Mr. Robertson's Meetings.

Dairy Commissioner Robertson began his course of meetings at Moosomin on February 1. After an address, the farmers present readily signed the stockholders list and a provisional agreement signed with the government on the terms already made public. From the nature of the preliminary meetings held in the west, previous to Mr. Robertson's visit, it is pretty certain that hearty support will be given to his project at a good many leading centres in the Territories, which are much better fitted for cream gathering factories than for cheese making. Large numbers of cows are to be milked, and stock, so far as he has gone, has been taken up very eagerly by farmers and merchants who favor the scheme and wish to ensure its success.

The following is the programme of dates and places at which Professor Robertson will meet farmers and business men in the west to confer on the establishment of creameries to be managed for a term of years by the government:—Indian Head, Monday, Feb. 15; Fort Qu'Appelle and Lebre, Tuesday, Feb. 16; Winnipeg, Wednesday and Thursday, Feb. 17 and 18; Yorkton, Monday, Feb. 22, 10 a.m.; Saltcoats, Monday, Feb. 22, 2 p.m.; Regina, Wednesday, Feb. 24; Moose Jaw, Friday, Feb. 26. The forenoon meetings will be at 10 o'clock, and the other meetings will be at 1 o'clock. Owing to the large area to be covered, and the limited time available, it has been impossible for Mr. Robertson to visit all the places to which he was invited. He will be glad to meet delegates from other places at any place on the foregoing programme on the date mentioned. At several points where creameries cannot be started this year preparations may be made for establishing them for the season of 1898.

The officers of the recently formed Pipestone Farmers' Institute are as follows:—President, Wm. Lothian; vice-president, Peter Fairlie; secretary-treasurer, J. G. Rattray; directors, Jas. Lothian, P. A. S. Milliken, John R. Davis, David Forsyth, Reeve Guthrie.

With such a directorate, and 40 charter members, this ought to be one of the most useful institutes in the province, and The Nor'-West Farmer wishes them every possible success.

### CORRESPONDENCE.

While our columns are always open for the discussion of any relevant subject, we do not necessarily indorse the opinions of all contributors. Correspondents will kindly write on one side of the sheet only and in every case give the name—not necessarily for publication, but as a guarantee of good faith. All correspondence will be subject to revision.

#### Water in Wells.

A rancher writes The Farmer that the rise and fall of water in wells spoken of in Mr. Wenman's letter last month is caused by the difference of pressure in the atmosphere. Springs and streams rise and fall in the same way, and coming changes in the weather can often be foretold in this way.

#### Champion on Vets.

W. M. Champion, Reaburn, writes as follows:—"I must congratulate you on the great improvement I notice in your paper. You are certainly keeping up with the times. I have been studying The Farmer all the morning, and if I make a few comments on some of your able writers, I hope it won't give offence. I very much admire Fred. Torrance, D. V. S., for he does not use long words, and writes in such a way that we farmers can understand, and that is why I am able to discuss his paper. He has fallen into the same error that nearly all V. S.'s do. For instance, in wounds of the cow's teat or udder, caused by wire fences, he says cleanse the parts with carbolic acid and water. Why did he not give the proportions (one of acid to 25 or 30 of water?) Again, he says stick the parts together. He does not say what to sew with. Linen rots, horse hair cuts, so use white silk, but I have found good diacolon plaster, cut in narrow strips and made usable by heating, and to draw a cut together, fasten two pieces of plaster on opposite sides of the cut and draw the cut close. A handy thing for heating plaster in the stable is a hot smoothing iron. Again, I see a subscriber of Springfield asks for something to help a sick mare. H. D. Smith, V. S., says to give her a quart of raw linseed oil "after due preparation." Now, if that man had known what was required in the way of preparation, he would know what to give his mare. That prescription is on the same lines as that from the Brandon vet., who for the cow with inflamed udder prescribes a good big dose of salts. A man who has taken salts himself would think such a dose, say

1½ pounds, a pretty big dose indeed. What I am driving at is that the doctors should in such cases take nothing for granted, but give the details carefully. If we heard them ourselves at such meetings we could ask, but when printed afterwards for outsiders, something that everyone can make sure of is necessary."

#### Hay Loaders.

R. C. Smith, postmaster, Steep Creek, Sask., writes that the Rock Island hay loader works well with him. He has used them for years in North Dakota. You hitch the machine behind a wagon, with four horses, one man driving, another building. It will lift clean, either from swath or winrows, and land it all right on the wagon. Subscriber, Brandon, wants to know a Canadian firm that makes or sells hay forks or slings. The machine of Mr. Champion already referred to is for loading off the wagon on to the stack, and any one could see it at work on his place at Reaburn in the hay season.

It is 300 years since the potato introduced from South America was planted by Sir Walter Raleigh on his farm in the southwest of Ireland. It was a century later before any field potatoes were grown.

It has been repeatedly stated that grain crops on land that has been limed are much less injured by rust than where no lime was used. Liming is scarcely a practical question here, but if any reader has actual knowledge of such a fact it would be interesting to know it.

The bee has always been held up to the admiration of mankind as the type of industry, and the product of his unceasing labors, the fragrant honey from the hive, has been regarded as one of the few delicacies left to us which could not be tampered with by a trick of trade, or imitated by the wiles of chemistry. But alas! this is not so. It is said that imitation honey, made from starch, sugar, Indian corn doctored with sulphuric acid, and from sugar and dextrine, is now placed upon the market, and that it is very difficult to distinguish it from the genuine article. Before the tariff commission at Guelph, witnesses, on behalf of the Canadian bee keepers, said large quantities of adulterated honey were being dumped into Canada by Americans, to the great injury of Canadians, who were honest producers. They asked that regulations be enacted providing for the total exclusion of the spurious American article.

# THE NOR'-WEST FARMER

ESTABLISHED 1882.

The only Agricultural Paper printed in Canada between Lake Superior and the Pacific Coast.

THE STOVEL COMPANY,  
PROPRIETORS.

CORNER McDERMOT AVE. AND ARTHUR ST.  
WINNIPEG, MANITOBA.

SUBSCRIPTION to Canada or the U.S., \$1 a year, in advance. To Great Britain \$1.25 (5s. sterling). Agents wanted to canvass in every locality, to whom liberal commissions will be given.

## ADVERTISING RATES.

Transient advertisements, for less than three months, 15c. a line (each insertion). Terms for longer periods on application.

All advertisements estimated on the Nonpareil line—12 lines to an inch. A column contains 128 lines.

Copy for changes in advertisements should be sent in not later than the 1st of the month to ensure classified location in the same month's issue. Copy for new advertisements should reach the office by the 4th of each month.

## LETTERS.

Either on business or editorial matters, should be addressed simply "THE NOR'-WEST FARMER, Winnipeg," and not to any individual by name.

WINNIPEG, FEBRUARY, 1897.

## THE TARIFF COMMISSION.

The event of the month, so far as farmers are concerned, has been the Tariff Commission. Of the commissioners themselves it may be said, without any fear of contradiction, that they evidently desired to get as near to the facts of the situation and the exact opinions of the witnesses who appeared before them as the time at their disposal would allow. They came in search of evidence, such as this meeting could supply, regarding the desires of the farming community as a whole, and also to learn the opinions of the business men, whose interests would be affected by such changes as the already published programme of the Dominion Government would produce. The milling and lumber interests are the only home industries of the west of any account and both were very ably represented. The evidence offered by the witnesses may be set down as ample for the demonstration of their position, because offered by gentlemen fully qualified by their position and personal qualities to do justice to their claims. Another dozen witnesses could hardly have more clearly stated the case for these great interests than was done by the few who did appear. The lumber combine was very severely denounced by nearly every farmer who had the floor. But the fact is that this organization is not one whit more blameworthy than any other trades union now existing in Canada. The bricklayer, or any other trades union artisan, bears all he can against "scabs," who for any reason breaks prices, and takes as severe, or even more severe measures to compel obedience to their rules as does the lumber dealers' union, and if we denounce the men who combine to fix the price of our dressed lumber, consistency demands that we should also "go for" every combination in the country that is run on the same principles and for similar objects.

This is not said in the interests of the one combination assailed by the farmers, but in justice to the men who, having invested far too freely in the business, are now as badly squeezed as any farmer. The lumber and stove and wire nail combines are the natural sequents of undue investments in protected industries, and the men who resort to such devices to avert the worst consequences of their enterprise are as much to be pitied as blamed.

The main thing to be settled is whether the evidence put before the commission during its three days' sitting is an accurate presentment of the views of the mass of the western farmers. The number of witnesses was very great, and had there been double the number, it would be quite natural for those who dissent from them to allege that they were far from representative in character, were, in fact, to a great extent selected because of their known adherence to the Grit local government, and as a rule were agitators and extreme radicals. If these allegations were correct, the whole affair would be very much a fiasco. But it can scarcely be successfully denied that the plan taken by Mr. Greenway of having each local M. P. P. nominate a representative farmer out of his constituency was well fitted to bring out the opinions of the farming community as a whole, and the invitation to farmers' institutes and Patron lodges came from the Dominion Minister of Agriculture. The orator from Altona only betrayed his utter ignorance of everything connected with farmers' institutes when he frothed about the institute men being political agitators. Politics are strictly avoided in their meetings, as everybody knows who has any right to speak on the subject, the right acquired by actual knowledge.

The chief speaker for the institutes may be taken as fairly representing their views, and what did he say? Simply that the government, in dealing with this question, shall act in accord with the principles they and their leader avowed when seeking the support of the people of Canada. It is for you, said Mr. Elder, to plan how you can consistently, with justice to invested interests and the requirements of your finance minister, carry out those views, what we now ask is that you shall not forget them, for we mean to hold you to these pledges or turn you out if we can at the next opportunity. The Patrons are political in their organization, and their spokesman called for the very same thing, reform without revolution. By a standing vote, and their signature, every man at the meeting in the government building endorsed the platform thus explained and supported, and the wheat buyer from Altona was among the number. The last answer to the charge of packing is the fact that of the four men from Virden who got a hearing, every one voted against the government candidate at last election, and two have been all along Conservatives. Mr. O'Malley, who has operated the same binder fifteen years, is the one bright sample of a protectionist farmer, who came to the front "faithful alone among the faith-

less he." It is a pity that more note was not made of the number of Conservatives, who came as representatives of the opinion that protection is an obsolete creed so far as they are concerned. And if the protectionists feel aggrieved because there were so few supporters of their faith, the fault lies with themselves, not with their opponents.

One thing more. The farmers did not come forward to oppose the import duty on American flour. What they did say, as plainly as words could make it, was this:—We are charged with inconsistency in wanting free equipments, while getting protection for our own produce. Our reply is that we can see very little benefit to us in the import duty on foreign wheat and flour, but if there is such a benefit we are quite prepared to be consistent. You drop the tariff on implements, lumber and similar necessities, and we will cheerfully sacrifice all the advantages the tariff can ever bring to us as farmers.

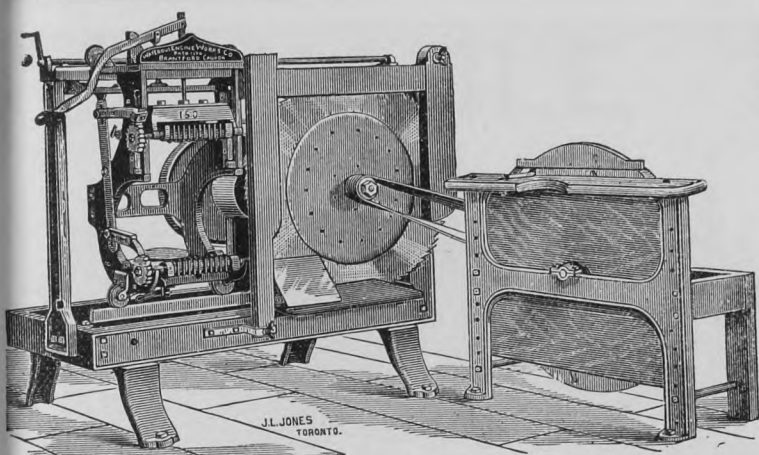
It must be frankly admitted that some of the evidence was of the stump orator variety. But even that showed that the men who offered it were well capable of thinking out and expressing their opinions.

Let it be noted, in conclusion, that whatever complaint was made of the hardships incidental to their experience in the past as farmers, no one complained of the country itself. This country is good enough for us. We think we can make it a fit home for ourselves and our children. All we want is a fair field and no favor. The intelligence, shrewdness and sincere patriotism of the hundred and more delegates from all parts of Manitoba and the Territories who spoke, cannot be questioned, even by those who differ most widely from them. And they are not mere adventurers. Their all is at stake in the country, whose fiscal policy they seek to influence, and if at any point they are mistaken, they are not the men to shirk the consequences.

## CHANGING ROUND.

The farmer who has not just struck the right thing needs, if he don't always get, the sincere sympathy of his neighbors and friends. A few years ago he made a big spurt in the direction of horse breeding, which, when combined with wheat growing, was sure to make a profitable combination. There was no use then of any one suggesting to him that the mares which were to breed the fine colts he reckoned on, needed a good deal of rest just when a wheat farmer was busy seeding, and that although his Ontario bred mares were costing him over \$500 a team, their colts might not be worth half that figure, and there is no use crying over his blunder now. His fancy took a turn for a little while toward improved dairying, and he was one of the very first movers at the farmers' institute for a creamery, and a visit from gentlemen of that persuasion to shed light on that form of farming enterprise. But while mares and

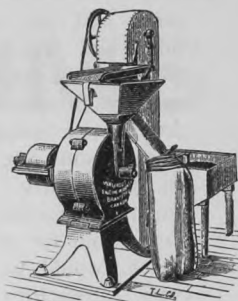




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colts can be turned to grass for a spell, and wheat will grow whether its owner is awake or sleeping, a man with cows must work seven days a week all the year round, and not a drop of milk will come without special effort. In short, dairying is drudgery without one extenuating circumstance, and the sooner the cows go to build up a fortune for somebody else the more pleasant will it be both for them and their present owner. When flax was over a dollar a bushel he sowed it on 40 acres of his best summer fallow. This could hardly fail to be a sure thing, and a good few dollars an acre more profit than wheat. But somehow that flax would not ripen, and the only thing that ever came of it was pleasant picking for his neighbors' cattle that feasted on it till Christmas. Pork, too, had his attention for a very short while. One of his neighbors made a hit by selling a lot at eight cents live weight, and he collected all the brood sows he could get hold of. That spec. also turned out rather poorly, and his attention is now divided between raising wheat at 60 cents a bushel and brome grass at 20 cents a pound. The mystery to those who know him best is how he has contrived to keep his head above water in the face of so many abortive results. The storekeepers, in whose books he cuts far too large a figure, would like very much if he would take to the gold mines. Farming is certainly not his forte.

Some people who think they can see a long way into a millstone venture to suggest that the only way by which our versatile friend could possibly have floundered on as long as he has done, is that some confiding friend or friends far away have had such faith in his brilliant auguries that they have been allured to make "investments" in the sunny northwest by the glowing pictures of its resources sketched by him, and the all too brilliant pamphleteers, on whose forecasts he and they have banked so extensively. Sooner or later he and all such as he will have to learn that here, more than anywhere else perhaps in

the world, the only reliable investment is steady industry and unflinching attention to the prosaic details of every-day pioneering.

—The other day, at Grenfell, Judge Wetmore gave one man a year's hard labor for shooting a man, and when another was brought up for wounding a mare, gave him two years in the penitentiary. The full details of each case are not published, but this seems very like a case from the Arizona Kicker.

—The publishers of The Nor'-West Farmer inform their readers that the issues for January, April, May, and June, 1896, are quite exhausted, and if any subscribers have numbers of the above months which they have no use for, the publishers will be much obliged if they will forward them to The Farmer office.

—It is understood that Messrs. Gordon & Ironside will go into the dead meat business in preference to continuing much longer the present method of shipping out western cattle. The expense of transport would be greatly reduced, the meat would be in much finer condition killed at or near where the cattle were raised, and various minor advantages would accrue. Whether they will begin operations at a western centre or make Winnipeg the point of collection will depend on how they may be arranged with by the towns desiring the establishment of such a desirable industry in their midst.

—Democratic America has a supreme contempt for most things British, but contrives, at the same time, to imitate the old country in queer ways. The other day a few miles south of Chicago, seven gamekeepers employed by a gun club of that city, had a hard fight with fourteen farm lads whom they caught poaching on their preserves. Five men were wounded in the

fight that followed, three of them very seriously, and enquiry is to be made whether the keepers or the poachers were the first to fire. A Scotch farmer, who visited Manitoba some years ago, said the other day that he was ordered off his land also by a farmer here in Manitoba, because he was carrying a gun with an eye to business. Game protection is not confined to aristocratic squires in the old country.

—A spare hour or two could hardly be put to better purpose by every farmer than by testing his seed oats to prove their fitness for the purpose. Oats in most districts have been very light, as a consequence of smut and rust, and are also more liable to injury from slight heating than any other kind of grain. Rapid City district claims to have about the heaviest oats in the province, and those wanting a change of seed should look that way for it. All oats should be put through the fanning mill, so as to save only the heaviest for seed. A simple way to test is to put down a given number of seeds, say 20, in a moderately warm place, between two thicknesses of damp flannel. A few days will test the vitality of any seed tested in this way. Of course, care should be taken to keep the cloth from getting too dry.

—A tenant farmer makes a good point in a city paper. He points out that if the government had bought in at tax sales the lands now in the hands of speculators, it would have been in possession of enough land all over the country to offer to hundreds of settlers at a merely nominal price. No one can blame the speculators who now hold such lands for wanting to make all they can out of them. They have laid out their money and paid taxes on the chance of getting some one to take their lands off their hands and turning them to profitable account. But it is not yet too late to take up the matter, and, as suggested, allow new entrants to take up such

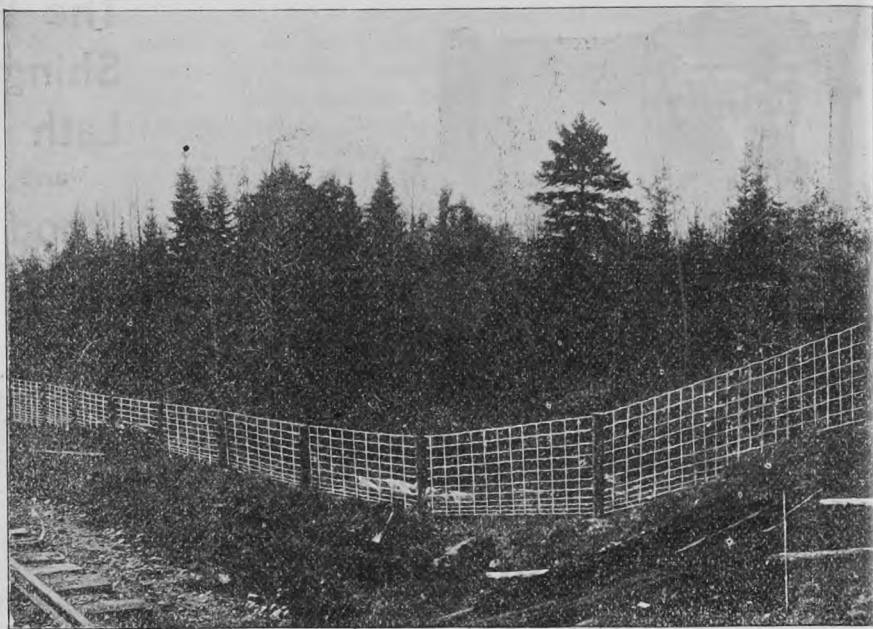
lands and pay their price with interest added on. To buy back, as some people propose, the lands now controlled by the railway companies, and hand them over free to new immigrants would break down to a ruinous rate the value of all the land in the country. But to make provision for the purchase, at a modest value, of lands sold for taxes, to be used as suggested, would be sound business, and a very satisfactory way of filling up the country.

—In the great anxiety felt by farmers as a body to make a strong demonstration of their views on the tariff question, there is danger of one very important point being overlooked. On behalf of the Manitoba Dairy Association, John Hettle, M. P. P., president of the association, presented a petition for a great reduction, if not the entire abolition, of the duty on dairy requisites. The same plea was made by S. M. Barre, as a dealer, and later on ably demonstrated by Ed. Anderson, of Springfield. The dairy industry of the west has been long handicapped by special difficulties, and now that strenuous efforts are being made to develop it, it has become quite clear that the cream-gathering system is the only one that can be worked with any hope of profit. Such being the case, no greater boon could be granted to the pioneers in this enterprise than a complete abolition of the duties on cream separators. In the case of all other duties there were counter-balancing advantages for high-priced wheat and high tariffs went pretty much hand in hand. But our butter factories must face fierce competition in markets supplied by already well organized industries, often bonused by their respective governments, while we must do pioneer work under special difficulties, and if we are this year to pay a high duty on the machinery indispensable to the starting of new factories the entire abolition of duty next year, even if that were decided on, would do us very little good. We want encouragement at the only time it can do us any good; to lower or abolish the duty after we have bought all we want would be a mockery. Now or never is the time to get cheap separators for the new west.

### The Annual Conventions

The annual convention of the Dairy, Cattle Breeders' and Sheep and Swine Breeders' Associations will be held at Winnipeg, in the city hall, the third week of February, 1897. The programme of the separate and joint meetings of these associations will be as follows:—

Dairy, Tuesday, 16th, 10:30 a. m., meeting of directors; 2 p. m., general meeting. Papers on Cheesemaking, A. A. Jury; Signs and Signs of the Times, W. M. Champion; How can we extend the milking period of our cows? S. A. Bedford; Discussion on each of these papers. At 8 p. m., papers, The History of Breeds, Dr. Rutherford; Production of Cream on the Farm for Use of Factories, C. C. McDonald. Discussion to follow. Wednesday, 9:30 a. m., election of officers.



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1873

Paper by D. Munroe, A good Dairy Cow, How to Get and Keep Her. Evening, 8 o'clock, paper, Pig-Raising as an Adjunct to Dairying, J. Y. Griffin. Address, by Dairy Commissioner Robertson.

The Horse Breeders' Association holds one session on Wednesday.

Pure Bred Cattle Breeders—Thursday, 18th, 9:30 to 12 a. m., business; 1:30 p. m., address, "The Cattle Industry of the Northwest Territories," by Angus McKay, Indian Head; question box, Hugh McKellar, Department of Agriculture, chairman of committee; address, "The Special Purpose Dairy Cow," by J. S. Cochran, Crystal City, discussion led by D. Munroe, Neepawa; address, "Can the Manitoba Farmer Compete with the Ranchers in Raising Export Steers?" by R. D. Foley, Manitou; address, "Why I Prefer the Hereford," by Wm. Sharman, Souris, discussion led by J. E. Marples, Deleau; address, "My Experience with Cultivated Grasses," by J. S. Robson, Manitou, discussion led by Andrew Graham, Pomeroy.

Thursday evening, 7:30 o'clock—Joint committee of above named societies, also Horse Breeders' and Poultry Associations. Address of welcome, by Wm. R. McCreary, Mayor of Winnipeg; response by Dr. J. G. Rutherford, president of Horse Breeders' Association, Portage la Prairie; address, "Schools of Domestic Science" and "Demonstration on the Cookery of Milk, Cheese and Eggs," by Miss B. Livingston, of the School of Domestic Science; address, by Hon. Thos. Greenway, Premier and Minister of Agriculture; address, by Prof. Jas. Robertson, Dominion Dairy Commissioner and Agriculturist. The Hon. Sydney Fisher, Minister of Agriculture for the Dominion, Ottawa, is also expected to deliver an address. The programme will be interspersed with music and songs.

Sheep and Swine Breeders' Association—Friday, Feb. 19th, business meeting, 9:30 to 12 a. m. The afternoon session opens at 1:30 o'clock, evening session at 8 o'clock. 2:30 p. m., address and demonstration on the "Economic Cookery of Foods," by Miss B. Livingston, of the School of Domestic Science; question box, Hugh McKellar in charge; address, "Can Hog Raising be Made Profitable in the Northwest Territories?" by A. B.

Potter, Montgomery, Assa.; address, "Diseases of Hogs," by J. S. Thompson, Provincial Veterinarian, discussion led by M. Young, V. S., Manitou; address, "Fitting Show Sheep," by P. McLaren, Crystal City, discussion led by Wm. Wallace, Niverville; address, "The Feeding, Care and Management of the Brood Sow," by Chas. Ellis, Parkdale, discussion led by Wm. Kitson, Burnside; address, "Hog Feeding, and the Proper Time to Kill," by S. A. Bedford, Experimental Farm, Brandon, discussion led by James Brag, Longburn; address, "Tree-Planting, and Its Benefit to Live Stock," by W. V. Fraser, Emerson, discussion led by R. L. Lang, Oak Lake.

It is specially requested that all those who come in to attend this meeting, or the meeting of the Horse Breeders, Pure Bred Cattle, Sheep and Swine or Poultry, will secure certificates from the agent at their station. The larger the number of delegates to these meetings the lower the rate secured from the railway companies. If we have one hundred delegates a one-fare rate will be given. All the certificates should be presented to G. H. Greig for signature.

Among those who made successful passes as first year's students at the Guelph Agricultural College were A. H. Hawke, Winnipeg, and J. H. Tozeland, Killarney, Man.

The new Minister of Agriculture for the United States will be James Wilson, Director and Professor of Agriculture in the College of Iowa. His parents emigrated from Ayrshire, Scotland, when he was 16 years of age, and after a few years spent in the east settled in Iowa. He was one of the best plowmen in the state, and followed up his education to such good purpose that he was in due course elected to the local legislature, where he became speaker, and afterwards sat in Congress, where his talents were fully recognized. It is gratifying to find both here and in the States that a Minister of Agriculture must first be a farmer, and then demonstrate in public life his fitness to represent the farmers, whose interests he is to control.



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6

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## FIELD.

Drill Tests and Smut Prevention,  
Brandon Experimental Farm.

## DRILL TEST, BARLEY.

Soil, clay loam ; size of plot, one-tenth of an acre.

Variety.	How sown.	Amount per acre.	When sown.	When ripe.	Days maturing.	Length of straw.	Yield per acre.	10s. & bu.
Odessa.	Hoe drl	7 Pks	May 26	Aug. 18	84	30	59-18	50
"	Press "	6 "	"	" 17	83	33	53-26	49
"	B'dcast	9 "	"	" 20	86	35	36-42	49

## DRILL TEST, OATS.

Soil, clay loam ; size of plot, one-tenth of an acre.

Banner	Hoe drl	7	May 26	Sept. 4	101	50	89-04	35
"	Press "	6	"	" 4	101	50	81-16	33
"	B'dcast	9	"	" 5	102	50	69-04	36

## REMEDIES FOR SMUT IN OATS.

Sown, 22nd May ; soil, clay loam, one-twentieth of an acre ; after corn ; the heads on nine square feet were counted.

Variety.	Treatment.	B'd heads on 9 sq. ft.	G'd heads on 9 sq. ft.	Germ'n	Yield per acre.
Prize Cluster	Soaked for 24 hours in sulph. of potas'm	1	305	99	67-22
"	Dipped 5 minutes in bluestone, 1 lb to 3 pails water	13	403	96	70-20
"	Sprinkled with bluestone, 1 lb. to 6 bus. grain	16	381	92	67-02
"	Sprinkled with sulph. pot., 1 lb to 8 bus. grain	46	297	97	62-12
"	Dipped 5 min. in sulph. pot., 1 lb. to 3 pails water	71	324	96	64-04
"	Not treated	98	288	97	56-16
Banner	Soaked for 24 hours in sulph. potassium	0	361	99	86-16
"	Dipped 5 min. in bluestone, 1 lb. to 3 pails water	1	336	90	83-18
"	Sprinkled with bluestone, 1 lb. to 6 bus. grain	1	327	95	60-20
"	Sprinkled with sulph. pot., 1 lb. to 8 bus. grain	7	316	95	74-04
"	Dipped 5 min. in sulph. pot., 1 lb. to 3 pails water	5	304	92	85-10
"	Not treated	28	391	99	75-10

## REMEDIES FOR SMUT IN BARLEY.

Soil, clay loam ; size of plot, one-twentieth of an acre ; sown, 22nd May. The heads on nine square feet were counted.  
Grown after corn.

Baxter's	Soaked for 24 hours in sulph. potassium	2	387		62-44
"	Dipped 5 min. in sulph. pot., 1 lb. to 3 pails water	5	474		62-12
"	Dipped 5 min. in bluestone, 1 lb. to 3 pails water	6	477		61-32
"	Sprinkled with sulph. pot., 1 lb. to 8 bus. grain	16	452		61-12
"	Not treated	16	376		60-40

The solution of sulphide of potassium was made by dissolving 1½ lbs. of the chemical in 25 gallons of water. The oats were then steeped in this solution for 24 hours, stirring occasionally, so that all the grain was well soaked.

The following is a description of the manner of treating large quantities of oats or barley by the bluestone method, as described by Mr. Elder: A quantity of liquid is prepared, composed of one pound of bluestone, dissolved in two pails of water; a coal oil barrel is then three parts filled with the grain, and sufficient of the liquid is poured on to just cover the grain. This is allowed to remain for a few minutes only, then the liquid is drawn off through a ¾-inch hole in the bottom of the barrel,

and the grain emptied out ; by adding about three-quarters of a pailful each time the same liquid can be used a number of times.

## Successful Wheat Growing.

(Continued.)

Many soils are far from reliable for wheat growing. Some are so light that it is probable that not one crop out of two will pay. Others may have body enough to bear a few crops, and then be in such a condition that it would be a blessing to the country if they could be in some way got under grass to prevent them becoming nurseries for every sort of weeds. Others may be too rich and cold, fit only for coarser grains, of which they are as a rule able to grow very heavy crops. Later on, by manuring, such land may be quickened so as to ripen wheat in time, but it has been a fruitful source of disappointment in the past, and should be cautiously handled so far as wheat is concerned. Cases have been known where, by sowing wheat, after barley, with little or no cultivation, such land will pay well. Deep cultivation is of doubtful advantage on such land where wheat is wanted, but if clean, it will be pretty safe to sow it to wheat with only such cultivation as the disc harrow supplies.

After ample test, Red Fyfe stands out as the reliable sort on which most men build their hopes. If sown on well-worked and well-compacted land moderately early, and not too thin, it will only take half a week or so more time to ripen than other sorts that can never fill its place as a high grading wheat. Perhaps the question as to vitality in the seed has had too little attention from us. Seed from the newest and soundest land should always have the preference, even if it is not so plump. No man can forecast the season, but general experience has been that very early seeding was bad, especially when put deep in. The later in the season, the less will be the risk from deep seeding.

Seed that has been badly cured and stored has caused more disappointment than some people have any idea of. Sweating in the stack in the fall is an important help to seed. Wheat is not so liable to mustiness and heat as oats. The lateness of our threshing season is another safeguard from this kind of injury, and Manitoba has lost much less than the States farther south from bad seed of this sort. It may be a question with some this year whether rust has injured last year's grain for seeding purposes. There is no evidence in past experience known to the writer of rust having done harm to the seed value of wheat. It may be a question this year whether bluestoning is necessary. It may not be, but so cheap and easy is bluestoning, as a preventive of smut that every prudent man will err on the safe side, and either sprinkle or dip his seed, say a pound of good bluestone to ten bushels of wheat.

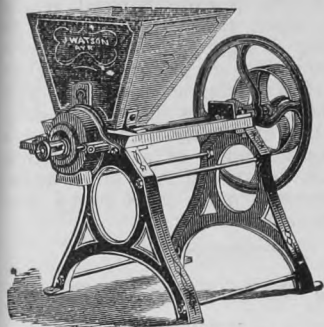
The best manner of seeding has been as thoroughly decided as anything in the whole range of experience. Last year the man who broadcasted on the surface of wet land had sometimes the advantage over his neighbor, who waited till the land was dry enough for the seed drill, but this was an exception to all ordinary experience, and other grains have given even more emphatic testimony in favor of the drill than even wheat. Spring plowing also did exceptionally well last year, and with the amount of snow now on the ground, there is little fear of spring plowing, followed promptly by the seeder, giving good satisfaction this year also. As a rule, spring plowing helps much to keep down all ordinary crop weeds.

The weed question is sure to crop up more and more as time rolls on. Couch grass has been very much aggravated by imprudent treatment while summer fallowing, but having it there, no bother need be made about it, as far as the wheat crop of this year is concerned. A bottom of couch grass in otherwise good land will not be a great drawback to this year's yield, and can be effectually dealt with next year at very moderate cost. How to get over annual crop weeds is a question open to discussion. Land that has been unskillfully fallowed last season may have a big lot of foul seeds ready to start that ought to have been germinated then. The land is now in the best of condition, and every foul seed that starts will be a robber of the strength that should have been taken by the wheat alone. Harrowing in the dry, windy month of April simply prepares the best of the mould for blowing off ; but harrowing, either at the time of seeding, or just when the weeds are showing through the surface, will kill the end of weeds, provided the good seed was drilled in say an inch and a half deep. If the harrowing is put off till the weeds have got past the seed leaf stage, it may as well be let alone. The best remedy for crop weeds is proper treatment in the previous year, but if there is only a moderate risk of blowing away, the man who harrows once, or even twice, on well-compacted land with a light harrow, before the weeds have got past the seed leaf stage, will kill myriads of weeds and do a lot of good to his wheat at the same time. Where there was a lot of foul seeds shed on the surface last fall, and a wheat crop is wanted again, a shallow plowing with the Ontario gang plow, after all last year's plowing has been seeded, is the safest policy.

Shall we sow on stubble without plowing ? That depends on what kind of a farmer you are. Last year there were many miserable failures after stubble seeding, and the worst failures of all were where the stubble had not been burnt off before seeding, but there were other cases where the crop after stubble was reasonably clean and a satisfactory yield. This was mostly in the west, which had a rare good wheat season, perhaps the best it ever had. Further east the land got toughened and wet, the weeds flourishing and the wheat standing still, with most wretched results all round. It will perhaps be found that in the places where wheat did best when simply drilled in on summer fallow stubble, the first crop had been put in on land too loose and soft the first year. If the land was well compacted the first year, and the growth of straw not rank, it is much wiser to give a shallow spring plowing before seeding it to wheat a second time. Every farmer who has this question of stubble seeding before him now should hark back over his last two or three years' experience, and see if it accords with the points here indicated. All experience goes to show that if a fire could be started in rough stubble after a few drying days, taking the afternoon to do it, the crop following will be all right. Land exhausted by over-cropping and weeds, and often poor work as well, is bound to produce more weeds than anything else, and no surer test of the quality of its owner, and the work he has been doing, can well be found than a crop of stubble-sown wheat.

Now is the time to revise our past experience and observation for a few weeks more will land us in the thick of seed time, when working alone is in order. The front rank place, in peace or war, must in the end be taken by the man who has done his thinking at the right time.





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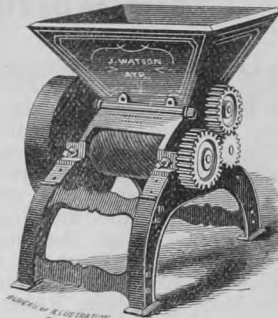
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1864



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SEND FOR A PAMPHLET—AND MENTION "THE NOR'-WEST FARMER."

1865

### Seed Tests From Ottawa.

The Central Agricultural Farm at Ottawa has just issued a 32-page bulletin, which gives in concise form the results of nearly all the tests made on all the experiment stations of the Dominion in growing grain, corn and roots during the season of 1896. The difference in production of the same sorts on the different farms is very striking. For example, most people would naturally expect the rich valley of the Frazer River to prove one of the most fertile sections of the Dominion. Its actual average in wheat, of best 12 varieties was 27 bushels, 2 lbs., against 44 bushels, 13 lbs. at Indian Head, and 47 bushels, 48 lbs. at Nappan, N. S. In six-rowed barley it made 27 bushels, 31 lbs., against 66 bushels, 37 lbs., for Indian Head. In two-rowed barley, 38 bushels, 28 lbs., for 66 bushels, 28 lbs., Indian Head. In oats, 56 bushels, 14 lbs. to 93 bushels, 24 lbs., Indian Head, and in peas, 19 bushels, 11 lbs., to 57 bushels, 11 lbs., at Brandon. In every case, 12 leading varieties at each station, are joined to supply the general average.

In corn, Brandon leads with over 28 tons, Indian Head has less than 11. In mangels, Brandon has over 44 tons, Indian Head over 16, and Nappan over 30. In potatoes, Brandon has 506 bushels, and Agassiz 184 bushels. It may be assumed that the lands in each case are fairly representative of the country they are found in, yet in scarcely any one thing does the Fraser Valley approach the prairie farms in profitable results. The information supplied by this bulletin is not given just to show which parts of the Dominion are most profitable to farm in, but it is not unfair to apply it in that way.

Early-sown turnips, mangels and carrots, is a conspicuous advantage all through, going far to demonstrate that the longer the season of growth the more likelihood there is of a paying yield. The very high returns supplied may suggest to some a straining to get fancy results, but with the pains taken to secure clean cultivation, and other advantages, we may always expect big returns, especially when such yields are contrasted with the inferior cultivation and hasty methods often forced

on the man who is always shorthanded and too often also short of cash.

On the whole, this Bulletin No. 26 is one that should be in the hands of every farmer who wishes to learn what is being done on these five principal stations to guide the everyday farmer in the selection of the kinds of seed best conducive to his interests as a grower. Of course, the fact that they only represent one year's work must be taken into account. Indian Head, for example, has had these last two years a run of exceptional good luck, while Brandon suffered badly from rain storms and rust. Taking the situation as a whole may it not be set down as fairly well established that a man wanting feed on the western prairie would find it safest this year to try for oats alone, or oats and peas mixed, while nearer the Red River corn of the earliest and best varieties ought to have much greater attention than it has ever yet had. Let it never be forgotten that the total cost to the farmer of every such bulletin is merely the value of the paper he writes on. His letter to the Central Farm, Ottawa, asking for 3 lbs. of seed of any new variety, and any bulletin such as this into the bargain will go free. One thing keep in mind. The seed is given for a set purpose, to show how it will suit your place. Don't let the pigs go through it because it costs you no money, but give it a fair show, all the protection and cultivation it needs, and report at the year's end what it has done with you. No one should have anything out of this distribution who has not reported at headquarters what his last samples did for him, and the sooner Director Saunders makes this his rule, the better will it answer the purpose for which these samples are given.

Successful Fire Guarding.—A correspondent of the Tribune says: "Fire will not jump your guard if you sow it late with flax. The fire burnt up to a forty acre field of mine after it was ripe, and the flax put it out. It is a sure guard, and it can be cut for feed after danger is over. Try it, and perhaps save your buildings and crop, and in any case you would be sure of the flax."

### Government Seed Samples.

The following circular is sent us by Director Saunders relative to the free distribution of samples from the Central Experimental Farm at Ottawa :

"During the past nine years, samples of those varieties of grain which have succeeded best on the experimental farms have been distributed on application in 3-lb. bags to farmers in all parts of the Dominion, free through the mail. The object in view in this distribution has been to add to the productiveness and improve the quality of these important agricultural products throughout the country by placing within the reach of every farmer pure seed of the most vigorous and productive sorts. This work has met with much appreciation and a considerable degree of success.

"Instructions have been given by the Hon. Minister of Agriculture to make a similar distribution this season. Owing to the very large number of applications now received it is not practicable to send more than one sample to each applicant, but with this limitation it is hoped that the stock will be sufficient to permit of every farmer who so desires sharing in the benefits of this useful branch of the work of the experimental farms.

"The distribution now in progress consists of some of the most promising sorts of oats, barley, spring wheat, pease, field corn and potatoes. Requests for samples may be sent to the Central Experimental Farm, Ottawa, at any time before the first of March, but after that date the lists will be closed so that the applications then on hand may be filled before seeding begins. All communications can be sent free of postage. It is desirable that each applicant should name the variety he desires to test, also one or two alternative sorts in case the stock of the sort chosen should be exhausted, while no promise can be made that the variety asked for will be sent, the wishes of correspondents will be attended to as far as practicable. The samples of grain will be sent early, but potatoes cannot be distributed until the danger of injury in transit by frost is over."

### Damage by Floods.

In the court of Queen's Bench, Winnipeg, on January 13th, Mr. Justice Killam delivered judgment in the case of Archer vs. The Rural Municipality of Franklin. The plaintiff owns and resides upon the east half of section 19, township 2, range 3 east, and brought this action to recover damages for the flooding of her land. Some years ago the municipality constructed a ditch from the C. P. R. to the Red River to carry off the surplus water. In May, 1896, one Robert Scott, as the plaintiff alleged, with the consent and approbation of the municipality, stopped the ditch so that the water, instead of flowing through the same, was diverted from its course and overflowed the plaintiff's land. Plaintiff alleged that if the ditch had not been constructed, and the water had been allowed to remain in its natural courses her land would not have been flooded. Owing to the land being flooded the plaintiff was unable to cultivate same and lost the benefit thereof.

The municipality defended the action, denying that the damage complained of was caused by the ditches having overflowed or being out of repair.

His lordship held that the plaintiff could not recover and entered a nonsuit with costs.

His lordship reviewed the facts and evidence at some length, and found that the obstructions made in the ditch by Scott's sons were done by them solely for the purpose of protecting their father's property. Scott did not pretend to direct them as a member of the board of works, though no doubt the sons were acting with his concurrence as his servants. In this he represented himself alone and not the municipality. There was no evidence whatever that he had any authority to obstruct the ditch on behalf of the municipality or to impose any liability upon the municipality by so doing. The obstruction in the Scott ditch was due to the acts of individuals having no authority thereof from the municipality.

### Farm Yard Manure Again.

Since the article on this subject appeared in the last issue of The Farmer, attention has been drawn to the old Scotch method familiar in some places yet. Cattle are wintered in open sheds, sometimes in loose boxes, and the manure from these is allowed to lie for months till it has got thoroughly saturated with the urine, whose virtue does not escape into the atmosphere when trodden firm. The cleanings from the horse stable are thrown in every day and get compacted in the same way, and so firing is avoided. Why should not feeding cattle be dehorned, and three or four turned into a loose box, say 10 or 12 feet square, in which they could stay and be fed till some feet in depth has accumulated? All this could be hauled out on the land and roughly spread just before the break of spring, when there is little else doing, and plenty of time therefore to spread it a good deal more thoroughly than is usually done in a temperature a good way below zero. Of course, if, as some good farmers do, the whole manure of the farm is put out daily to gather snow and rot through heating, so as to be put out in the spring, the rotting part of it is all right, but much less of the ammonia of the liquid manure finds its way into the soil. To rot under cover, where all the virtue liquid and solid can be preserved till it can be put where it will do the most good, seems both economy of labor and of manurial value. This question is full of practical interest, and there are farmers who have had young bulls

living all winter under cover in this fashion who might help a good deal by giving a few details of their past year's experience.

### Irrigation at Calgary.

The Calgary Herald gives a very glowing account of the success of the irrigation system started there three years ago. There are now 400 acres under irrigation by three miles of ditch.

"The year before we began to irrigate," said Mr. Hull, as he showed a press representative over the place, "we got ninety tons of crop off that land. The first year with irrigation we got 600 tons, the second year 1,000 tons, and this year we expect 1,200." No more striking proof of the benefits of irrigation could be sought.

The ranch contains thirty-two miles of Texas fencing. A band of cattle averaging 500 head, ready for the butcher, is kept on it the year round. As regards feed, shelter, water, scenery and every complement of an ideal ranch it is perfection. Traversed as it is by two streams—the Bow river and the Fish creek—there is no lack of water for either stock or crops. No prettier sight can be imagined than the straggling bands of fat Shorthorn steers along the valley of Fish creek, with its background of timber and hills, and grass knee-high.

The crop grown includes wheat, barley, oats, brome and timothy. The hay of this crop is now being sold to go to the Kootenay at \$10 a ton, and the regular excellence of all the crops contrasts strangely with the uncertain and tantalizing yield under the old system. The brome does as well under irrigation as elsewhere when contrasted with other crops, and there is an almost universal accord in sounding its praise as the best seeded grass for Alberta. Mr. Hull is demonstrating the value of irrigation still nearer Calgary than on his ranch above alluded to, and easterners may reckon on seeing a big display from these reclaimed lands at the first Winnipeg exhibition.

### Gluten in Flour.

The Arkansas experiment station has a recent bulletin dealing with the nature and composition of flour. It says:—

"Gluten is an elastic semitransparent mass of material which remains when flour is carefully washed with water in such a way as to remove the large quantities of starch and other matters which always occur with it. If a few spoonfuls of flour are mixed with water to a moderately stiff dough and allowed to stand for an hour in a saucer or other convenient dish the threads of gluten may be readily seen by pulling the mass apart with the fingers. If the mass of dough be placed in a strong cotton or linen cloth and worked between the thumb and fingers in a quantity of water until a fresh supply of water does not become milky from separated starch after a few minutes working, nearly pure gluten will remain in the cloth and its nature can then be readily seen. It is this gluten which gives wheat flour its peculiar value for bread-making purposes. The carbonic acid gas which is formed by the growth of yeast in a mass of bread dough, or which is set free from baking powder when it is wet with water, or from baking soda when it is wet with sour milk, accumulates itself in numerous small pockets which it forms in the dough. These pockets are formed because of the presence of this tenacious gluten which is so elastic as to permit the gas to force it aside without breaking it, and yet so compact as to prevent the escape of the gas.

The walls of the pockets formed retain their places when the bread or cake is baked, giving a light porous loaf very different from that of bread made from corn flour. Corn contains no gluten. The gluten of different flours differs not only in amount but in quality. Bakers like a flour containing much of a very strong gluten. Such flours will take large quantities of water and make more bread to a given weight of flour.

### How to Make Farming Pay.

A little farm that is well fitted  
In every nook and corner  
With choice fruit and grain will yield  
Ample support to its owner.  
A little flock of fifty hens  
(The pure bloods always pay the best),  
If fed on oats and wheat and a little meat,  
With eggs will fill the nest.  
One cow or more that gives rich store,  
If never kicked and cuffed by the men,  
Will fill the bucket brimming o'er,  
If given all to eat that she can.  
But a costly house that's built for the eyes  
Whether of freestone, or brick, or wood,  
Is seldom best for the owner's purse,  
Or for his loved ones' highest good.  
One dog, one cat, that is quite enough,  
To chase the vermin away and catch the rats  
That kill our chickens and eat our grain,  
And other foods both this and that.  
It's the little leaks that make us poor,  
If we want to succeed we must beware:  
We must build or buy just what we need.  
We require to be wise, and act with care.  
Whatever stock on the farm is kept,  
It always pays to feed well and shelter;  
And all farm tools should have a place  
And not left scattered about helter-skelter.  
The budding poet who wrote the verses  
given above may get to the head of the procession some day, if he stays long enough in it, and works hard.

R. D. Foley, of Manitou, has been appointed Homestead Inspector for the Winnipeg district by the Dominion government.

It is reported that A. McKinnon, of Portage la Prairie, will build an oatmeal mill of solid stone at Rapid City as soon as the season will admit. The oats of the district are unsurpassed in quality, and a good mill ought to be a great boon to the farmers.

The stable of a farmer in Macdonald was destroyed by fire last week and the declaration filed with the insurance company as to the cause was to the effect that he had piled hay around the pump and set fire to it in the stable to thaw it out, and the insurance company are now paying the claim.

Mr. Goodwin, one of the leading authorities of Argentina, speaks of the situation there:—"Harvesting time brings out the weak points of the country, and there is a tremendous struggle to get in the crop with the scanty supply of labor available. Unfortunately for the after condition of the grain, it is most usual in Santa Fe to cut wheat with headers and make anywhere on the fields what are simply piles of short straws. Green weeds cut and stooked with header cut wheat are very often responsible for the heating of stacks that has occurred in many years. In ordinary seasons if reasonable care is taken in handling the header-cut wheat, the rains, if not too heavy at the outset, make a thatch of sprouted grain which protects to some extent that beneath. Threshing is always hurried up as soon as machines and sufficient men can be had."



## Qualities of Wheat.

William Wilson is an old miller living near Port Arthur, and he gives in Farm and Fireside some points about wheat well worth noting here. He says: "There are upwards of one thousand varieties of wheat. Every wheat growing country has a considerable number of different varieties, yet the wheat of every country has certain special characteristics which distinguished it from that of every other country. For instance, Canadian wheat differs considerably from that of the United States, and there is a much greater difference in the wheat grown west of the Rocky Mountains from that grown to the east of the Mountains, than between that of any two countries that I can name. From the farmer's point of view the most prolific wheat is the best. The miller and baker look at it from a different point of view. With them quality is the main thing, and when the quality of a wheat is thoroughly known it soon finds its level on the market. There are three qualities in wheat which determine its value in the market, first, strength; second, color; third, flavor. Of these strength is considered the most valuable; but the wheat which unites these three in the most perfect proportion is the wheat (other things being equal) which will bring the highest price in the market, and be most remunerative to the farmer. But there is no rule with regard to wheat but has its exceptions. In fact, I may say that wheat has so many exceptions that it has almost no rules at all, for example, the wheat which generally brings the highest price on the British market is Dantzic, a soft, white wheat of fine flavor, medium color, and under the average strength, but it excels all others for mixing with the strong, dark wheats of Southern Russia, and not being in large supply it keeps always at the top of the market. Of all wheats that which approaches nearest to perfection is the Theiss wheat of Hungary. It is of good strength, color and flavor, somewhat like the Red Fyfe in appearance, but the berry is rather larger and plumper. Next to it I would place Manitoba Red Fyfe. It is fully as strong as the Hungarian, but not as good in color and flavor. No other wheats come near to these. To make flour equal to that produced by either of these requires a mixture of several kinds from several different countries.

"Spring wheats are in general much stronger than winter, but we find notable exceptions. The Theiss wheat of Hungary is a winter wheat, while Colorado spring is, I think, the weakest wheat grown on this continent. Red wheats are in general stronger than white, but there are exceptions to this rule also. Long berried wheats are in general stronger than short, but Egyptian is a long berried wheat. The weight of wheat per measured bushel is a very poor criterion of its quality. Some fifty or sixty years ago farmers in the West of Scotland grew a wheat named Pearl, which was very prolific, and ran up to 66 to 68 lbs per bushel, yet it was so poor that millers and bakers absolutely refused to buy it. They had to give up growing it. Weight per bushel depends very much on the size and shape of the berry. The strength of wheats depends on the quantity and quality of the gluten they contain. Warm, bright sunshine is essential to the proper maturing of the gluten, so as to make it of the best quality, but it does not seem to affect the quantity; that appears to depend mainly on the soil, although some kinds of wheat have the ability to extract more gluten from the soil than others. The time of cutting also has a considerable effect on both quantity and quality of the gluten. If wheat is allowed to get too ripe before being cut, it in some manner

loses a considerable quantity of its gluten, and if it is too green when it is cut, although there is a larger quantity of gluten, it is thin and watery, and in baking the flour works similar to that made from frozen wheat. The best time, in my opinion, for cutting wheat is when it has on that peculiarly beautiful golden tint which skilled farmers love so well to see. At one time most farmers were inclined to let their wheat be too ripe before cutting. Now I am afraid a good many of them go to the other extreme, and cut too early.

"Wheat is all the better for being kept for about a year in the stack or granary before being milled, and the flour should be kept for a month or six weeks before being used. This appears to be necessary to bring it into proper condition to give the best results when made into bread. What it is in the soil from which the wheat extracts the gluten is yet a mystery, and no fertilizer has yet been discovered which increases the quantity. Indeed, all manuring seems to tend the other way. Sir John Lawes, the veteran experimenter, states that the quantity of wheat may within certain limits be increased at will, but the quality is as yet beyond human control."

An old country authority says:—"The strength of the flour is determined by the proportion of its insoluble gluten. The more of this it contains the more loaves of bread can be made from it. Thus a sack of best Hungarian flour will make about 112 four-pound loaves, whereas from an ordinary sack of stone-ground flour only 92 four-pound loaves can be made."

Mr. Wilson thinks soil has more influence than climate on wheat. We should say that it takes a good deal of the best sorts of both to make high grade milling quality. The abundant year of 1895 was more like an old country season than any we have yet seen, and in some places in Manitoba the gluten was of such poor quality that wheat from more favored points had to be used by the miller to make good the defect. A curious instance favoring Mr. Wilson's view of the superior influence of soil was furnished some years ago, when a car of choice seed from Larimore was distributed in Minnesota. The difference in the resulting samples after this seed was a great surprise. Some was very good, much of it middling and part very poor. The best sample grew furthest south, below St. Paul, and some very low grade grew north of Crookston.

## Hail Insurance.

At a recent meeting held in Winnipeg of the directors of the Provincial Mutual Hail Insurance Company of Manitoba, it was reported that the acreage insured during the past year was not so large as might have been expected, and that the damage by hail throughout the province was greater than on any year since the company was formed in the province.

Notwithstanding the heavy losses of last year the directors were able to declare a dividend of 50 per cent. on the ascertained damage to all who were insured in 1896. They also declared a dividend of 15 per cent. on the loss of 1895, and 10 per cent. on those of 1893. The payments per acre of the company since it was formed, on damage, stands as follows: In 1891, \$7.50; 1892, \$6; 1893, 5.70; 1894, \$6; 1895, \$4.50; 1896, \$3, which is a very fair showing, considering the difficulties the company have had to contend with.

The Dauphin Railroad Co. is taking measures to supply all settlers in that district with well-cleaned seed of the best quality at a low cost, so as to ensure a superior grade of crop next year. This is sound business.

## TO FARMERS AND DAIRYMEN !!!

### ENCOURAGE PREFERENTIAL TRADE WITH ENGLAND

Where we sell our butter, and buy the

'Alexandra,'

the only English machine, the cheapest and best Cream Separator sold in Canada. It is crowding others out of the market.

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S. M. BARRÉ,

240 KING ST.,

WINNIPEG.

1858



## Winter Excursions.

For accommodation of people who have to leave the rigorous climate of the Northwest, excursion tickets are now on sale to

### CALIFORNIA.

A land now clad in the freshest verdure of spring. Tourist car accommodation through. First-class sleeping accommodation at lowest rates.

Passengers desirous of a short refreshing ocean voyage can take one of the splendidly equipped Steamers from Victoria, or can go one way returning the other.

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The Paradise of the Pacific. An Island of perpetual summer.

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European passages going via C.P.R. have choice of five Atlantic ports and twelve lines of Ocean Steamships.

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Lowest rates. Quickest time to Kootenay. Rossland, Nelson, Sandon and the Slocan country reached in 2½ days. No stop-overs.

Apply to your nearest agent for pamphlets descriptive of all countries, or write to

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# SOMETHING BETTER AND SURER THAN A GOLD MINE.

# BARGAINS IN FARM LANDS

The farms offered in this list are exceptionally cheap. Prices have been cut lower than ever to meet the increased demand and to give the farmer the advantage.

The terms offered are: One-tenth cash down, balance in nine equal annual payments, with a low rate of interest.

See or write me before buying elsewhere.

## STONEWALL AND BALMORAL DISTRICTS. PRICE

1.—N. $\frac{1}{2}$ 30, 14, 1 W . . . . .	Excellent buildings and large cultivation	\$ 1200
2.—N.E. 28, 14, 1 W . . . . .	Concrete house and partly improved	350
3.—S.W. 36, 15, 2 E . . . . .	Comfortable buildings, 12 acres cultivated	500
4.—S.W. 32, 15, 2 E . . . . .	" " " "	500
5.—S.E. 6, 16, 2 E . . . . .	Unimproved, good wheat land	600
6.—N.E. & N. $\frac{1}{2}$ of S.E. 16, 15, 4 E . . . . .	" " " "	1000
7.—N.W. & W. $\frac{1}{2}$ of N.E. 34, 12, 2 E . . . . .	" " " "	(Offers invited)
8.—S.W. & N. $\frac{1}{2}$ of S.E. 35, 12, 2 E . . . . .	" " " "	"

## PLYMPTON, LORETTE AND ST. ANNE'S DISTRICTS.

9.—S.E. 18, 10, 6 E . . . . .	80 acs under cultivation, house and stable	\$ 1000
10.—S.W. 24, 7, 7 E . . . . .	Log buildings and large cultivation	500
11.—Lot 5, Lorette . . . . .	177 acres; improved farm cheap at	900
12.—" 20 and 21, Lorette . . . . .	352 acres, inner and outer two miles, comfortable buildings and large cultivation	2000
13.—" 66, St. Anne's . . . . .	200 acres extra good buildings and large cultivation	900

## DOMINION CITY AND ST. MALO.

14.—S.E. 35 & N.E. 26, 1, 4 E . . . . .	Excellent half section unimproved	\$ 1200
15.—E. $\frac{1}{2}$ 36, 1, 4 E . . . . .	Good stock farm, hay abundant	800
16.—N.E. 6, 1, 5 E . . . . .	Log buildings and cultivation	600
17.—S.E. 28, 1, 5 E . . . . .	No improvements	400
18.—N.W. 28, 1, 5 E . . . . .	Log buildings and 40 acres cultivated	500
19.—S.E. 28, 2, 5 E . . . . .	No improvements	400
20.—N.W. & N. $\frac{1}{2}$ S.W. 18, 4, 5 E . . . . .	240 acres wild land	500
21.—S.W. & S. $\frac{1}{2}$ of N.W. 30, 4, 5 E . . . . .	240 " " "	500
22.—S.W. 10 & E. $\frac{1}{2}$ of S.E. 9, 5, 3 E . . . . .	210 " " "	500

## RED RIVER LOTS.

23.—Lot 4, St. Andrews . . . . .	188 acres, 10 miles north of Winnipeg	\$ 1000
24.—" 29, " . . . . .	44 acres, outer 2 miles only, unimproved	250
25.—Lots 72, 73, 74, St. Norbert . . . . .	865 acres, at St. Norbert village, wild land	9000
(Will sell these lots singly or collectively)		
26.—Lot 613, St. Agathe . . . . .	155 acres, 15 miles south of Winnipeg, improved	1600
27.—" 559, " . . . . .	160 acres at Village of St. Agathe, unimproved	1200
28.—Part lot 463, " . . . . .	49 acres Silver Plains Station, improved	400
29.—Lot 232 " . . . . .	160 " opposite St. Jean, improved	900
30.—" 532 " . . . . .	240 " St. Agathe Village, wild land	1500
31.—N. $\frac{1}{4}$ Lot 150 " . . . . .	62 $\frac{1}{2}$ " near Letellier, half under cultivation and ready for seed	750
32.—Lots 290 and 292, St. Agathe . . . . .	240 acres, 110 acres broken, nice farm, good buildings	1800

## HEADINGLY, OAKVILLE AND HIGH BLUFF.

33.—Lot 16, Headingly . . . . .	24 chns. wide, 800 acres, fine buildings and largely cultivated	\$ 7000
34.—S.W. 10, N. $\frac{1}{2}$ N.W. 3, 11, 5 W . . . . .	240 acres wild land	500
35.—N.W. & W. $\frac{1}{2}$ N.E. 23, 9, 1 W . . . . .	240 " " level prairie	600
36.—N.W. 26, 11, 3 W . . . . .	160 " unimproved fine prairie	800
37.—N.E. & E. $\frac{1}{2}$ of N.W. 4, 9, 2 E . . . . .	235 " " near La Salle Station	1000

## MANITOU AND SOMERSET DISTRICTS.

38.—S.W. 36, 2, 9 W . . . . .	5 miles south of Manitou, unimproved	\$ 500
39.—W. $\frac{1}{2}$ 36, 4, 9 W . . . . .	Excellent stock farm, near St. Leon	1000
40.—N.W. 16, 5, 9 W . . . . .	Buildings and cultivation near Somerset	650

## BALDUR AND CARTWRIGHT DISTRICT. PRICE

41.—S.E. 20, 4, 13 W . . . . .	Partly summer fallowed, log buildings	\$ 700
42.—All 13, 4, 14 W . . . . .	Excellent section, unimproved	3000
42A.—S.E. 12, 5, 14 W . . . . .	Well improved: buildings, fencing and cultivation	600

## SOURIS, BOISSEVAIN AND DELORAINE DISTRICTS.

43.—E. $\frac{1}{2}$ 4, 8, 20 W . . . . .	Good buildings and large cultivation	\$ 3200
44.—All 6, 5, 21 W . . . . .	Comfortable buildings, 325 acres cultivated, large summer fallow	3500
45.—S.E. 6, 1, 24 W . . . . .	Comfortable buildings, 50 acres cultivated	600

## PIPESTONE, VIRDEN AND OAK LAKE

46.—S. $\frac{1}{2}$ 18, 9, 23 W . . . . .	Large summer fallow and small house	\$ 1000
47.—N.W. 24, 7, 27 W . . . . .	Nearly all summer fallowed, no buildings	800
48.—S.E. 22, 7, 26 W . . . . .	Small cultivation, no buildings	700
49.—S.W. 22, 8, 27 W . . . . .	Very comfortable buildings and large cultivation	600
50.—N.W. 10, 9, 26 W . . . . .	" " " "	600
51.—N.W. 6, 8, 23 W . . . . .	Frame house, log out-buildings, and 50 acres broken	500
52.—N.W. 19, 8, 23 W . . . . .	Small cultivation	500

## STRATHCLAIR, MINNEDOSA AND RAPID CITY.

53.—W. $\frac{1}{2}$ of N.W. 18, 16, 22 W . . . . .	80 acres near Strathclair, unimproved	\$ 250
54.—N.W. $\frac{1}{4}$ 3, 16, 20 W . . . . .	160 " Newdale, 30 acres new breaking	500
55.—N.W. 24, 14, 21 W . . . . .	Good stock farm, no buildings	400
56.—E. $\frac{1}{2}$ 22, 14, 21 W . . . . .	" " plenty of hay	800
57.—S.W. 24, 14, 20 W . . . . .	" " no buildings	400
58.—S. $\frac{1}{2}$ 1, 14, 21 W . . . . .	Fine place for mixed farming	1000
59.—S.W. 27, 12, 21 W . . . . .	Unimproved	500
60.—E. $\frac{1}{2}$ 28, 12, 20 W . . . . .	Excellent grain farm, no buildings, large new breaking	1200
61.—N.E. 2, 15, 20 W . . . . .	40 acres cultivated, frame dwelling	550

## CARBERRY AND DOUGLAS DISTRICTS.

62.—S.E. 19, 11, 16 W . . . . .	7 miles north of Douglas, improved, good well water	\$ 600
63.—S. $\frac{1}{2}$ 1, 13, 15 W . . . . .	Near Wellwood, a large cultivation of summer fallow	1700

## PORTAGE LA PRAIRIE AND MARQUETTE.

64.—S.E. 7, 11, 7 W . . . . .	No improvements, considerable timber	\$ 400
65.—N. $\frac{1}{2}$ & S.E. 2, 13, 3 W . . . . .	One mile west of Marquette, fine hay land	1500

## CITY OF WINNIPEG.

66.—Lot 125, Maria Ave. . . . .	Fort Rouge, large frame house on stone foundation, being Street No. 375	\$ 2500
67.—Lot 5 in Blk. 10, McWilliamst. No. 440, frame house on lot 28 x 112, to a lane . . . . .		1000

These city properties are great bargains.

NOTE.—These prices are liable to change at any time. If they do not suit you make me an offer and it will receive favorable consideration.

WM. HARVEY,

210 PORTAGE AVENUE, WINNIPEG.

IF YOU DON'T WANT A FARM, KINDLY DETACH AND SHOW THIS TO ONE WHO DOES



## Tariff and Prices.

A long-headed critic points out that the method taken by the Central Farmers' Institute to show how much protective tariffs have cost the farmers on wheat-growing and similar machinery, may be twisted round to favor protection. He says that the reduction in prices within 20 years will be brought forward as an argument for the retention of the present scale of duties. It is not easy to tell all the methods that will be employed to retain high duties, but such an argument will stand very little honest investigation. Improved machinery, superior skill in all the details of construction and the immense increase in the demand have all had their share in pulling down the cost of farm appliances. In the States, where intense protection has done all it could to keep up prices, nearly every sort of machinery has been cut down to half the money it cost twenty years ago. In 1878 the twine binder was introduced to supersede the old wire binder. It retailed at \$310 to \$325, and the twine cost 15 to 25 cents, as to quality. The Deering Harvesting Co., of Chicago, were last year quoting \$145 as the highest figure for their roller and ball-bearing machines, while other machines were as low as \$100. The best Deering to-day costs \$100 less than the old Marsh wire binder, and with it one man and two horses can handle more grain in a day than was done by three men and three horses in 1873. The Osborne Company, of Auburn, N. Y., quoted the other day as follows, the retail price of farm machinery:

	1873.	1896.
Mowers .....	\$100	35 to \$ 40
Reapers .....	125	50 to 60
Combined mower and binder .....	175	75 to 85
Harvester and binder 1878 .....	300	100 to 125
Rakes .....	60	20 to 25

The United States have been very largely governed on extreme protectionist principles, but the operation of principles that no protection can neutralize has cut down prices there perhaps even faster than has been the case here. It cannot be proven that either in the States or the Dominion protection has much influence either way in raising or lowering the price of farm machinery.

## The Patron Movement.

At the recent Patrons' Convention held in Brandon, M. T. T. Green, of Portage la Prairie, was re-elected president, and Mr. Chas. Braithwaite, vice-president. Mr. Graham was elected secretary, and Messrs. Fisher, Thompson and Marshall, trustees. The associations will be known in future as "The Provincial, County and Local," instead of "Grand, County and Subordinate." The Northwest Patrons have severed their connection with Manitoba associations. The ritual has been abolished, and in future all Patrons will be eligible for membership who are approved of by the local association. The Patrons' Sentinel will be discontinued, and a paper will be started in Winnipeg by an independent party, and conducted in the interests of the Patrons, providing the Patrons secure 1,200 subscribers at 50 cents each, for the balance of the year 1897. The paper will be a weekly, similar in size and make-up to the Winnipeg Tribune, and will contain the general news of the day.

Advertise in The Nor'-West Farmer.

## The Tariff Resolutions.

As is already known through the weekly press, Messrs. Fielding and Paterson, members of the Laurier cabinet, have held an enquiry in the city hall, Winnipeg, with the view to finding out the views of this western community on the tariff question. In anticipation of such enquiry, meetings of various kinds and organizations have been held all over the province of Manitoba, and after very free discussion resolutions embodying the views of those who took part have been adopted. Patrons of Industry and Farmers' Institutes have dealt with the question, and to make sure of still fuller representation, the Hon. Mr. Greenway invited every member of the local parliament to send in, at the expense of the country, a representative farmer out of his own constituency, who would adequately represent the opinions of his district on the tariff question. These delegates met in the legislative hall at the government buildings, and after lengthy and free discussion adopted the following resolutions and appointed Mr. John Fleming, of Deloraine, as their spokesman in presenting them:—

1. It is our opinion that a protective tariff is detrimental to the best interest of our Dominion, and that in the framing of a new tariff it should be entirely abandoned, that until free trade becomes practicable a "tariff for revenue only" should be adopted, levied mainly on luxuries or upon articles of general consumption not produced in the country.

2. That agricultural implements, farm machinery and all tools used on the farm, binder twine, fence wire, lumber, nails and building material, coal oil and fruit, be free, and that the duty on salt, cotton and woollen clothing be materially reduced.

3. That the high protective tariff has very materially restricted commerce with Great Britain, which is the country we look to above all others for our markets, and has greatly retarded the settlement of this province.

4. That the adoption of an income tax, with reasonable exemption, would be desirable.

In addition to the above memorial, the following resolution, adopted at the same meeting, was submitted and agreed to:

"Moved by Jas. Elder, seconded by K. McKenzie, that as it had been represented to the commissioners that the farmers of this province wish the duty retained on

wheat and flour, that this meeting hereby express its opinion that the said duty is of no practical value to the farmers of Manitoba and the Northwest."

There are somewhere near sixty Poultry and Pigeon papers published in the United States at present.

Manitou has had for years a good farmers' club, but it is very likely before long to be changed in to an institute. There can be no better men anywhere to form an institute than are in and around Manitou, and The Farmer trusts they will soon be organized into a strong and working institute.

The estimates of area and product of the principal cereal crops of the United States for 1896, made by the statisticians of the Department of Agriculture are as follows: Corn, area, 81,627,000; product, 2,283,875,000; yield per acre, 28.2 bushels. Winter wheat, area, 22,794,000; product, 267,934,000; yield per acre, 11.8 bushels. Spring wheat, area, 11,825,000; product, 159,750,000; yield per acre, 13.5 bushels. Total wheat area, 34,619,000; product, 427,684,000; yield per acre, 12.4 bushels.

Little's sheep dip is so well-known that almost every farmer must have heard of it. In Canada, where it has been used for many years, it has had the approval of the very best breeders in the Dominion, such men as Hon. John Dryden, Richard Gibson, John Snell's Sons, and Prof. Shaw. As a wash for the cure or prevention of ticks, lice and skin disease on cattle, sheep and pigs, it should be in the hands of every stockman. It can also be used with profit as internal medicine, killing worms at short notice.



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WILL MAKE YOU  
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BONE CUTTER.**

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Green cut bone will make  
your hens lay. Write for  
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Assets.....\$216,773,947  
Reserve on all existing Policies (calculated on a 4 per cent. standard) and all other Liabilities ..... 173,496,768

Undivided Surplus, on a 4 per cent. Standard ..... \$43,277,179

### ASSURANCE.

(Instalment Policies stated at their commuted value).

Outstanding Assurance.....\$915,102,070  
New Assurance written in 1896 ..... 127,694,084  
Proposals for Assurance Examined and Declined ..... 21,678,467

**HENRY B. HYDE, President. J. W. ALEXANDER, V.-P.**

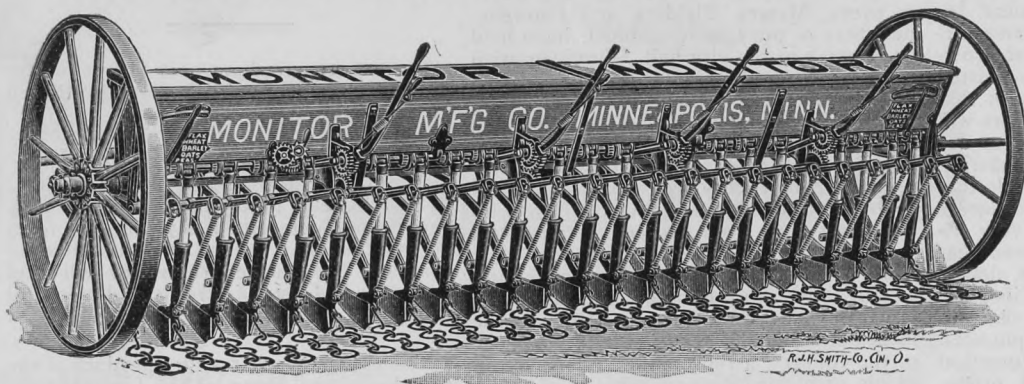
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435 MAIN ST., WINNIPEG.

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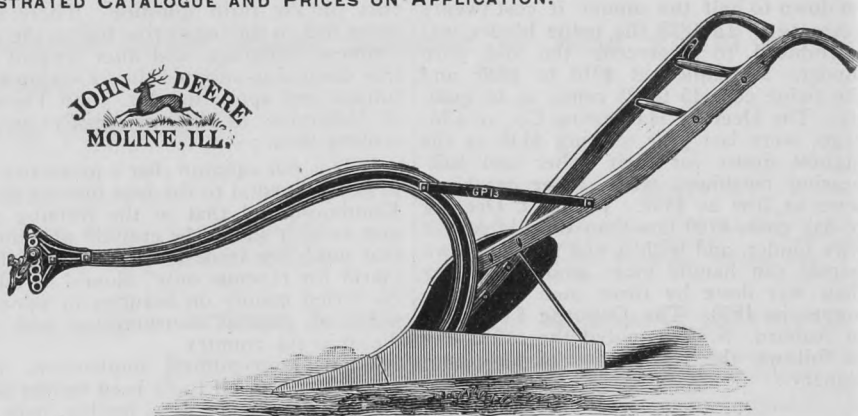
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## THE NOR'-WEST FARMER CLUBBING LIST.

The subscription price for THE NOR'-WEST FARMER separately is \$1.00 a year; by ordering through this office any one of the papers mentioned below, together with THE NOR'-WEST FARMER, you get the benefit of reduced rates. If more than one of the clubbing papers is wanted and only one copy of THE FARMER, the published price of the additional paper must be remitted. For example—the price of The Orange Judd Farmer and THE NOR'-WEST FARMER together is \$1.50; if you want also, say Hoard's Dairyman, the published price (\$1.00) must be added, making in all \$2.50.

	Regular Price.	With Nor'-West Farmer.		Regular Price.	With Nor'-West Farmer.
Breeders' Gazette, Chicago .....	\$2 00	\$2 00	Weekly Sun, Toronto .....	\$0 50	\$1 00
Hoard's Dairyman, Fort Atkinson .....	1 00	1 50	New York World (thrice-a-week edition) .....	\$1 00	\$1 40
Orange Judd Farmer .....	1 00	1 50	Harper's Magazine, New York .....	4 00	4 00
American Swineherd, Chicago .....	50	1 00	"    Weekly, " .....	4 00	4 00
Weekly Free Press, Winnipeg .....	1 00	1 50	"    Bazar, " .....	4 00	4 00
Semi-weekly Free Press, " .....	2 00	2 50	"    Round Table, " .....	2 00	2 25
Weekly Tribune, " .....	1 00	1 50	Scribner's Magazine, " .....	3 00	3 25
"    Nor'-Wester, " .....	1 00	1 50	Outing, " .....	3 00	3 00
"    Globe, Toronto .....	1 00	1 25	Cosmopolitan Magazine, " .....	1 00	1 60
"    Mail and Empire, " .....	1 00	1 25	Scientific American .....	3 00	3 25
"    Gazette, Montreal .....	50	1 00			



## Mr. Bedford's Addresses.

As he could only speak from notes, not more than an epitome can be given of what Mr. Bedford had to say on his recent trip. The following notes by the Virden Advance pretty fairly represent the purport of his discourse:—

Mr. Bedford, in opening his address, stated that 1896 had been indeed an exceptional year. Seeding did not commence until the 9th of May, whereas it usually commences a month earlier. The rainfall was excessive, and the temperature had been four degrees above the usual average. This excessive moisture, coupled with the extra high temperature, accounted for the prevalence of rust, and had also the effect of making wheat smutty. All vegetation, however, had made a phenomenal growth. Mr. Bedford then proceeded to review the work of the farm during the past year in various branches, which appear in order under their own sub-headings.

### WHEAT.

The speaker stated that the experiments at the farm had hitherto been carried on with a view of obtaining a better variety than Red Fyfe, but he considered that attempts in that direction were futile, as it was particularly good and adapted to the climate. Farmers should turn their attention to improving the strain of it; for in plant life, just as in animal life, selection has a good deal to do with the quality raised. Some of the hybrid varieties had done very well this year. The usual experiments in methods of sowing had been tried, and the result, as usual, was overwhelmingly in favor of the drill, as compared with broadcasting. The results of sowing on stubble in preference to spring plowing this year were the reverse of the ordinary. He explained this by saying that the spring plowing afforded better drainage than the stubble. However, he strongly recommended sowing on stubble in preference to spring plowing in anything but wet seasons on the second year after summer fallowing. The stubble, if long, should be burned off. The average yields last year were 17 bushels on stubble, 24 on spring plowing and 26 on summer fallow. The average yield per acre of the following varieties for the past four years is as follows: Goose wheat, 38 bushels per acre; Preston, 36 bushels per acre; Rio Grande, 35, and Red Fyfe, 33½.

### OATS.

The improvement in the grade of oats was far more marked than in wheat. They had oats grown on the farm under precisely the same circumstances, and one kind yielded 100 bushels per acre, and the other 16 bushels. This showed the necessity of selecting a proper variety; for on our extensive acreage a few bushels per acre meant a big difference in the wealth of the nation. He was opposed to using old country varieties, such as the Black Tartarian, because they were soft, rank growers, far more liable to rust than the Canadian varieties. Following is the average yield per acre of oats for the past five years: Banner, 88 bushels and 20 pounds; Holstein, 75 bushels; Black Tartarian, 61; White Russian, 70 bushels and 20 pounds. This shows that the Banner oats are by far the most productive, and experience proves that they are the best for general and milling purposes. Mr. Bedford urged the farmers to use those for seed. They were always the best on the farm under the circumstances. This year they had yielded as high as 115 bushels per acre. On the farm they had been greatly troubled with smut, but treating with bluestone had been highly successful in eradicating it. The new drug, "Liver of Sulphur," as it is called, is better than bluestone, but

its use is impracticable to ordinary farmers, because of the work entailed. They dipped and sprinkled with bluestone, but found that dipping oats was the best way. They had taken seed and treated it thus, with a result that where sulphur was used not one head of smut was found in three feet; bluestone treated seed gave one head in three feet; and untreated seed gave 28 heads of smut. The result is a complete proof of the efficacy of "treating" the seed. Where very smutty seed was used and not treated, 98 heads of smut existed in three feet, but bluestoning reduced it to 16.

The germinating qualities of the seed were not perceptibly injured by proper treatment with bluestone. Smut was easy to handle if taken right, but rust is a hopeless case; nothing will budge it. It is a germ from the atmosphere.

As a proof of the superiority of drill sowing, the following figures are given: Oats sown with a shoe drill yielded 89 bushels per acre; sown with press drill, 81 bushels per acre; and broadcasted, 69 bushels per acre. Mr. Bedford considered one kind of drill as good as another, because the results fluctuated according to the season, but the drill was always far superior to broadcasting.

### BARLEY.

The treating of seed barley for smut was not as satisfactory as he would like, but good results were always apparent. The old country two-rowed barleys were not adapted to this country, and he would advise farmers to steer clear of them. The Mensury variety of barley yielded 54 bushels per acre this year, and was the best for general purposes.

### PEAS.

Peas must be sown early, say about the second week of seeding, or otherwise they will mildew and not pod. Heavy land was necessary to grow peas successfully. Two to three bushels of seed per acre was necessary. Peas were such splendid feed, especially for hogs, that he would like to see more grown. They always had fine crops of them at Brandon, indeed the best he had ever seen were grown there. He had seen them there 12 feet in the vine and covered with pods. This year the averages of the following varieties were: Carleton, 62 bushels per acre; Kent, 61; Pride, 56.

### ROOTS.

The root crop results he was especially proud of. They were markedly improving. Mr. Bedford then described the method they follow in sowing their roots. They manure thoroughly in the fall, then go over it with a harrow turned upside down to spread the manure thoroughly. They then plow as deep as possible and harrow well; then they sow on the level with a common drill about the 15th of May. They never sow in drills. This year the mangolds yielded 1,760 bushels per acre; carrots, which are such an excellent feed for horses, 921 bushels per acre; turnips, 1,045 bushels of one variety, and 1,038 of the purple top, which Mr. Bedford says is the best for this country. These latter were exceptional yields, as about 800 bushels was the usual amount. The cut-worm does not bother their roots, because they clear the ground thoroughly of rubbish of all kinds.

### FODDER PLANTS.

They have one hundred plots of these on the farm, and find that the native grasses were always superior. Western rye grass was good for hay, but afforded poor pasture in spring and fall. Austrian Brome grass was the best for all-round purposes. It yielded 2½ tons per acre of hay and then gave fine fall pasture. The herd of milking cows had been losing in

## "WHERE DOCTORS DISAGREE."

There has been a great deal of disagreement from time to time about the therapeutic value of sarsaparilla. In the main, authorities deny any particular medical value to the plant. "It's just an old wife's remedy," they say. And in the main they are right. There are about a dozen varieties of sarsaparilla, scattered through various countries, and of this dozen only one has any real curative power. So a man whose experience might be confined to the eleven other varieties might honestly say there was little value in them. The one valuable sarsaparilla is found in Honduras, C.A. Monardes, a physician of Seville, records the introduction of sarsaparilla into Spain as a result of the Spanish discoveries of the New World, between 1536 and 1545. But the root did not accomplish much. But he adds, "a better sort soon after came from Honduras." It is this "better sort" that is used exclusively in Ayer's Sarsaparilla. And it is the use of this "better sort" that has given Ayer's Sarsaparilla prominence over all other varieties by reason of its wonderful cures of blood diseases. Send for the Curebook, a "story of cures told by the cured." Free. Address J. C. Ayer Co., Lowell, Mass.

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1866

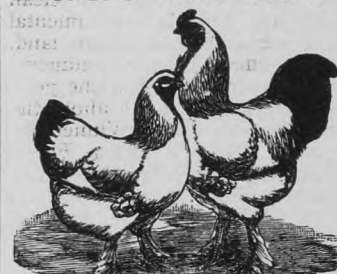
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Enclose stamp for reply.

1868

## NOTICE.

Notice is hereby given that the Eleventh Annual Meeting of the Manitoba Dairy Association will be held in the Council Chamber, Winnipeg, on Feb'y 16th and 17th. Reduced railway rates have been secured and visitors to this Convention are requested to obtain railway certificates, so that they may receive the benefit of the cheap rate.

**J. KERR**, Successor to  
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1861

milk at the rate of four pounds a day until turned into this to graze, but immediately afterwards they not only made up this four pounds, but passed the average by about 13 pounds daily. About 10 or 15 pounds of seed to the acre was sufficient. It was not difficult to eradicate if handled properly. It should be plowed up early, and then back-set. If this plan be not followed it will grow again after plowing.

Blue grass made good pasture, but millets were not satisfactory, as they are apt to stiffen up horses and give them indigestion.

#### CORN.

Mr. Bedford considered that this was the great fodder of the future. It was a most wholesome feed, and great quantities could be grown on a small piece of ground. This year they grew from 19 to 36 tons per acre, according to the variety. The North Dakota Flint was the best. They made ensilage of corn, also kept it in stooks and mixed in layers of straw. This method gave a taste to the straw, and the cattle eat both. They sow it in drills three feet apart and six inches in the row. He urged the farmers to grow more of it. Asked about ensilage and silos, he replied: "I believe it is our great fodder standby. This year we cut and put in the silo corn which had been quite heavily touched with frost. We always allow the corn to wilt thoroughly, for days even, before putting in the silo, and as a result I believe our silage is of the best quality. Experts have pronounced the silage made at the Brandon experimental farm to be the best ever seen."

#### POTATOES.

The lecturer gave a very minute description of the methods employed in planting. They plow early, then harrow thoroughly two or three times, after which they roll, then plant the seed in every third furrow. This year they did not use a hoe in the whole potato patch, and this certainly should be welcome news to the average farmer. After the potatoes were up they harrowed them two or three times, the last harrowing being given when the plants were two or three inches in height. They did not have scarcely a weed as a result, the first harrowing having germinated them, and the subsequent ones having killed them out entirely. They cultivated the crop twice, once to clean and once to hill up. On the experimental farm manure is never used on potato land, because they consider it is very conducive to scab. The following varieties, the yield of which is given below, are all about the same quality: Pierce's Prize Winner, 323 bushels per acre; Pierce's Extra Early, 318 bushels per acre; Early Rose, 258 bushels per acre. They had one variety that yielded 597 bushels per acre, but the varieties mentioned were the most satisfactory for table use.

#### FEEDING.

In this important branch of the farm work, Mr. Bedford said they had been thorough. He was convinced that corn was the best feed for cattle. In the matter of feeding oat sheaves against hay, they found that \$5 worth of good hay was just as good as \$7 worth of oat sheaves. This should make a very radical change in the prevalent custom of feeding oat shaves. They were about to commence testing oats and peas against oat sheaves. The oats and peas when grown together yielded from  $\frac{1}{4}$  to 1 ton more feed than clear oats, while the mixture was a much better ration for the animals, the peas supplying certain ingredients of food that could not well be obtained otherwise. Oats and peas were unfit for ensilage.

What Mr. Bedford had to say on garden produce and ornamentation will be found in another part of this issue under that heading.

#### Mr. Bedford at the Institutes.

We are favored by Mr. Bedford with the following notes of the meetings held by him within the last month:—

Birtle, Jan. 4.—Roads very bad after the big storm; only a fair gathering, but much interest. Evidently the Institute here has some excellent material and has always turned out well to hear speakers.

Elkhorn, Jan. 11.—This, as usual, mustered a large meeting, the hall being filled and the closest attention was paid to the address. It is a pleasure to speak before the Elkhorn Institute, and the discussion which followed the address showed that the farmers in this district are alive to their opportunities.

Virden, Jan. 12.—Evidently the attendance at this meeting was larger than expected, as the seating capacity had to be increased three times during the meeting. A good hearing was given the speaker, and the after discussion was a good bright one. Owing to an oversight, the evening meeting was not arranged for. In a settlement composed so largely of progressive farmers, the Virden Institute has always stood to the front.

Oak Lake, Jan. 13.—The Directors of this Institute, led by Mr. Lang, their Sec., had evidently worked up the interest in this meeting to a boiling heat, for the town hall, a large and bright room, was filled to the door, both afternoon and night. The address from Mr. Bedford was somewhat lengthy, but judging by the showers of questions following, the farmers were not wearied of hearing about the result of different experiments conducted on the experimental farm. The evening meeting was of a mixed character, music, dialogue, etc., brightening up the dryer, if more practical speeches.

Douglas, Jan. 14.—This was the smallest meeting of the series. The Institute here has never been very strong in numbers.

Pipestone, Jan. 15.—This was an organization meeting, and a large number of the most progressive farmers were in attendance. Officers were soon elected, and Mr. Bedford then gave an outline of the work on the Brandon experimental farm. The after discussion was a good one, and many points were drawn out. Over 40 members joined this Institute, and the prospects are good for a strong, vigorous organization.

Melita, Jan. 18.—This Institute is one of the most wideawake ones in the province, and the "Melita resolutions are proverbial." The attendance at the afternoon meeting, in spite of the storm, which had badly blocked all the roads, was a good one, and the interest and after discussion was very encouraging to the speaker. The evening meeting was even better attended than that of the afternoon, and Mr. Bedford's address on fruit and ornamental trees, was interspersed with music, etc. The president of the Institute is a host in himself, and no Institute can fail with such an energetic person at its head.

Deloraine, Jan. 19.—A blizzard raged all the morning, but in spite of it the attendance in the afternoon was good, and there was even a larger turnout in the evening, when Mr. Bedford spoke for 2½ hours on fruit and ornamental trees and flowers. Dr. Thornton and others have done some good practical work in avenue planting in this town, and the results are very satisfactory, and should encourage others to go and do likewise.

Boissevain, Jan. 20.—Bills calling this meeting were only posted the previous day, and few farmers knew of it, still 30 or 40 were on hand, and if proper notice had been given, the hall would have been packed, as it was when Mr. Bedford last visited this Institute.

Success "under" difficulties means success "over" difficulties.

"Science is a first-rate piece of furniture for a man's upper chamber, if he has common sense on the ground floor."—Oliver Wendell Holmes.

The London Live Stock Journal says: "It is fairly near the truth to say that in every civilized country but Great Britain the Merino is the predominant breed of sheep, and would also be substantially accurate to say that in no country but Great Britain is good mutton common. The vast majority of Americans have never seen a decent piece of mutton, and, in fact, comparatively few of them attempt to eat mutton at all. As the improved mutton breeds of this country make their impression gradually on the sheep stock of the States, so the American public is slowly learning that mutton, when properly bred and fed, is the finest meat-food which Providence has vouchsafed to mankind."

Commenting upon the Cruickshank Shorthorns, the North British Agriculturist pays the following tribute to the founder of the type: "In their hour of triumph the breeders of Cruickshank Shorthorns should not fail to remember the skill, the foresight, the courage and the tenacity of purpose which the Grand Old Man of Sittyton displayed in standing steadily by his own type of cattle when fashion was ruling imperiously in favor of a totally different strain of blood. For many long years the Cruickshank Shorthorns were practically boycotted by the vast proportion of home breeders; but the triumphs that they won in the New World proved their worth, and Mr. Cruickshank lived to see his life work crowned with unparalleled success. England's greatest dramatist has well said, 'There is a tide in the affairs of men which, taken at the flood, leads on to fortune.' The tide of popular favor, which in this case is ruled by wide experience, is flowing strongly in favor of Cruickshank Shorthorns. The flowing tide with the breeders of the best class of Cruickshank Shorthorns."

After a sow has had her first litter it becomes easier to determine whether she ought to be retained. If she has raised a good average litter, and has nourished them well, it is a mistake not to continue to use her. On the other hand, regardless of form, if the litter has been small and has not done well, fatten her off and get rid of her, and as the sow grows older, the same process of selection can go on, making prolificness and nursing capacity the criterion. A good brood sow should never be discarded unless one is sure that he is replacing her with a better one. No one would think of turning off a good dairy cow to replace her with a heifer that was an unknown quantity; and in like manner, the sow that does well as a breeder should be retained as such. One of the faults in swine growing against which there is now, we think, a reaction, is the too frequent changing of brood sows, which involves the breeding of immature animals. With matured sows, strong in the maternal functions, young boars may well be used, but changes in the breeding stock on the other side that involves the use of a large number of young things are to be avoided as much as possible.

Dyspepsia in its worst forms will yield to the use of Carter's Little Nerve Pills, aided by Carter's Little Liver Pills. They not only relieve present distress but strengthen the stomach and digestive apparatus.



## Farming in Alberta.

Last summer the Edmonton Agricultural Society offered prizes for the best short essay on working a 160-acre farm in that district. The following paper by "Rusty Cuss" was adjudged best, but found a little longer than the specified extent. It is not too long, and the writer puts his ideas in a pithy, practical style. It would take more money to fill his bill than the average pioneer can command, but in the main his programme is well worthy of careful study by any intending pioneer. All the essayists agree as to the importance of early seeding as a means of security from frosts, and they advocate fall plowing and summer fallowing for much the same reason. The soil is rich and the growth too free for prompt ripening of grain, and the caution given is necessary. "Rusty Cuss" writes as follows:—

My idea of working a 160-acre farm in the Edmonton district is as follows:—I would endeavor to get in a suitable rotation of crops as soon as possible, and continue in the rotation as follows:—First, wheat, then oats, then barley, then put out all the manure to be obtained, and plow it under in August as summer-fallow. The 160 acres I would divide as follows:—40 acres I would sow with wheat, 40 acres with oats, 30 with barley, 2 with potatoes, 2 with turnips, carrots, beets, etc., a garden of half an acre, and the remaining 46 acres I would use as pasture for cows, horses, etc. This pasture I would keep for say two years, then break it and sow with oats, then barley, then wheat, and seed down to grass or timothy.

I find one of the difficulties the farmer has to contend with is the growth of weeds in the fields after three years' cropping, and the best and most successful method of getting rid of them is manuring and summer-fallowing. The next best is seeding down to hay and mowing.

Deep plowing, say at least seven inches, would practice after the first three years, and turning the furrows not more than eight or nine inches wide. The practice of turning the furrows 12 or 14 inches should be discontinued after the first three years, as it does not pulverize the soil sufficiently. The disk or spading harrow should be thoroughly used before sowing, and the seed sown by a good press drill. After the seed is sown it should be well rolled with the heaviest roller.

Too much attention cannot be paid to the selection of good clean, pure seed; frozen seed should not be sown. The vitality of grain should be tested before sowing, especially oats and barley; frozen wheat may grow, but frozen oats and barley never. It does not make so much difference the kind of grain raised that leads to success in farming, but the keeping down of weeds and the thorough pulverizing of the soil is necessary to success. All the work done must be done only as a farmer knows how to do it. "A man must serve his time to every trade; farmers are not ready-made."

Presuming that a suitable dwelling house, stables and outhouses are built, and a tidy little woman on hand to assist in house work and butter-making, I would say 12 good milk cows to begin with will be sufficient, and from 6 to 12 pigs, 50 hens and a few turkeys. For dairy I prefer the Jersey or Ayrshire cattle, but for beef or milk give me the Shorthorn. Twelve good sheep to begin with will do to keep the house supplied with mutton and socks. Fall plowing should be attended to; at least eighty acres should be turned over in the fall, if you don't intend to be caught in the spring. For implements there should be one breaking plow,

two walking plows, one sulky plow, one disk harrow, one smoothing harrow, one seed drill, one roller, one wagon, one wheelbarrow, spades, shovels, hoes, rakes, etc. For horses, five good strong working horses and one driver.

In conclusion, too much attention cannot be paid to the keeping down of weeds. Deep plowing; get as much fall plowing done as possible; save all the manure, and be sure to put it out, and summer fallow without fail, and if there be any success in farming it will be yours. I may say, as the American humorist has said: "Work hard all day, sleep hard all night, save your money, and never get tight," and you will get along.

## About the Farmer.

W. M. Champion, Reaburn, writes:—"I must congratulate you on the great improvements I notice in your paper. You are certainly keeping up with the times."

Kenneth Murray, Rapid City, in renewing, says:—"Please continue sending in your valuable paper, The Nor'-West Farmer."

Thomas Oliver, Bagot, Man.:—"I am receiving a copy of your valuable paper, which I prize very highly."

Thos. E. Jackson, Indian Head:—"I am much pleased with The Farmer."

Chas. C. Rigby, Indian Head:—"I am glad to see that you are improving the paper generally, and can truthfully say that there are many good things and much good advice in it. The veterinary column has been a help to me several times. Wishing you more success than ever."

Wm. O. Laing, Clearsprings, writing us on the 18th inst., says:—"I am very well pleased with The Farmer, indeed, and I induced my brother to become a subscriber. With best wishes for its welfare and prosperity."

J. W. Shaw, Canmore, Alta., writes:—"I received January number of The Nor'-West Farmer to-day, with your premium, the celebrated Gleason Horse Book. I think it is all you have said about it, and well worth one dollar."

Nothing can bring true peace but the triumph of principles.—Emerson.

A most desirable accomplishment is the ability to get pleasure out of hard work.

At the present time there is more steel used in the manufacture of pens than in all the sword and gun factories in the world.

The Calgary Tribune reports that recently a large number of ranchers and others from every part of Alberta have visited the city, and when questioned as to the condition of the cattle on the ranges, the unanimous report was that the cattle are in fine condition and have completely recovered from the effects of the severe weather of November. The snow is reported very light on the prairie, and the stock have no difficulty in securing a plentiful supply of fodder.

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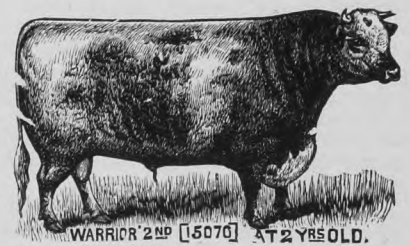
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The firm who is afraid to let you try their incubator before buying it, has no faith in their machine. We will sell on trial, not a cent until tried, and a child can run it with five minutes attention a day.

We won First Prize World's Fair and will win you for a steady customer if you will only buy ours on trial. Our large catalogue will cost you five cents and give you \$100 worth of practical information on poultry and incubators and the money there is in the business. Plans for Brooders, Houses, etc., 25c.

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## TIMOTHY SEED FOR SALE

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## HOUSEHOLD.

### The Rise of Andrew Carnegie, the Great American Millionaire.

(As Described by Himself.)

When I was born my father was a well-to-do master-weaver in Dumfermline, Scotland. He owned no less than four damask looms and employed apprentices.

As the factory system developed, hand-loom weaving naturally declined, and my father was one of the sufferers by the change. The first serious lesson of my life came to me one day, when he had taken in the last of his work to the merchant and returned to our little home greatly distressed, because there was no more work for him to do. I was then just about ten years of age, but the lesson burned into my heart, and I resolved then that "the wolf of poverty" would be driven from our door some day, if I could do it.

The question of selling the old looms and starting for the United States came up in the family council, and I heard it discussed from day to day. It was finally resolved to take the plunge and join relatives already in Pittsburgh. I well remember that neither father nor mother thought the change would be otherwise than a great sacrifice for them, but that "it would be better for our two boys."

In after life, if you can look back as I do and wonder at the complete surrender of their own desires which parents make for the good of their children, you must reverence their memories with feelings akin to worship.

Arriving in Allegheny City, four of us—father, mother, my younger brother and myself—father entered a cotton factory. I soon followed, and served as a "bobbin-boy," and this is how I began my preparation for subsequent apprenticeship as a business man. I received one dollar and twenty cents a week, and was then just twelve years old.

I cannot tell you how proud I was when I received my first week's own earnings. One dollar and twenty cents made by myself and given to me because I had been of some use in the world. No longer entirely dependent upon my parents, but at last admitted to the family partnership as a contributing member and able to help them! I think this makes a man out of a boy sooner than almost anything else, and a real man, too, if there be any germ of true manhood in him. It is everything to feel that you are useful.

I have had to deal with great sums. Many millions of dollars have since passed through my hands. But the genuine satisfaction I had from that one dollar and twenty cents outweighs any subsequent pleasure in money-getting. It was the direct reward of honest, manual labor; it represented a week of very hard work, so hard that but for the aim and end which sanctified it, slavery might not be much too strong a term to describe it.

For a lad of twelve to rise and breakfast every morning, except the blessed Sunday morning, and go into the streets find his way to the factory, and begin work while it was still dark outside, and not be released until after darkness came again in the evening, forty minutes' interval only being allowed at noon, was a terrible task.

But I was young and had my dreams, and something within always told me that this would not, could not, should not last—I should some day get into a better position. Besides this, I felt myself no longer a mere boy, but quite "a little man," and this made me happy.

A change soon came, for a kind old Scotsman, who knew some of our relatives, made bobbins, and took me into his factory before I was thirteen. But here for a time I was even worse than in the cotton factory, because I was set to fire a boiler in the cellar, and actually to run the small steam engine which drove the machinery. The firing of the boiler was all right, for fortunately we did not use coal, but the refuse wooden chips, and I always liked to work in wood. But the responsibility of keeping the water right and of running the engine, and the danger of my making a mistake and blowing the whole factory to pieces, caused too great a strain, and I often awoke and found myself sitting up in bed through the night trying the steam-gauges. But I never told them at home that I was having a "hard tussle." No! no! everything must be bright to them.

This was a point of honor, for every member of the family was working hard, except, of course, my little brother, who was then a child, and we were telling each other only of all the bright things. Besides this, no man would whine and give up—he would die first.

There was no servant in our family, and several dollars per week were earned by "the mother" by binding shoes after her daily work was done! Father was also hard at work in the factory. And could I complain?

My kind employer, John Hay, peace to his ashes! soon relieved me of the undue strain, for he needed some one to make out his bills and keep his accounts, and finding that I could write a plain school-boy hand, and could "cipher," I became his only clerk. But still I had to work upstairs in the factory, for the clerking took but little time.

You know how people moan about poverty as being a great evil, and it seems to be accepted that if people had only plenty of money and were rich, they would be happy, and more useful, and get more out of life.

As a rule, there is more genuine satisfaction, a truer life, and more obtained from life in the humble cottages of the poor than the palaces of the rich. I always pity the sons and daughters of rich men, who are attended by servants, and have governesses at a later age, but am glad to remember that they do not know what they have missed.

They have kind fathers and mothers, too, and think that they enjoy the sweetness of these blessings to the fullest, but this they cannot do; for the poor boy who has in father his constant companion, tutor and model, and in his mother—holy name—his nurse, teacher, guardian angel, saint, all in one, has a richer, more precious fortune in life than any rich man's son who is not so favored can possibly know, and compared with which all other fortunes count for little.

It is because I know how sweet and happy and pure the home of honest poverty is, how free from perplexing care, from social envies, and emulations, how loving and how united its members may be in the common interest of supporting the family, that I sympathize with the rich man's boy and congratulate the poor man's boy; and it is for these reasons that from the ranks of the poor so many strong, eminent, self-reliant men have always sprung and always must spring.—From the Youth's Companion.

There could hardly be found in this or any other generation a more telling example of the principle that it is the man himself much more than the chances he has of advancement, his future success must depend on. The other day a negro speaker said to his frivolous, ease-loving race: "It is at the bottom of life we must begin

and not at the top, nor should we permit our grievances to overshadow our opportunities."

### The Two Classes.

There are two kinds of people on earth to-day,

Just two kinds of people, no more, I say

Not the sinner and saint, for 'tis well understood

The good are half bad and the bad are half good.

Not the rich and the poor, for to count a man's wealth

You must first know the state of his conscience and health.

Not the humble and proud, for in life's little span,

Who puts on vain airs is not counted a man.

Not the happy and sad, for the swift flying years

Bring each man his laughter and each man his tears.

No; the two kinds of people on earth I mean,

Are the people who lift, and the people who lean.

Wherever you go, you will find the world's masses

Are always divided in just these two classes.

And oddly enough, you will find too, I ween,

There is only one lifter to twenty who lean.

In which class are you? Are you easing the load

Of overtaxed lifters who toil down the road?

Or are you a leaner, who lets others bear Your portion of labor and care?

—Ella Wheeler Wilcox.

### Why the Leaves Change Color.

"Probably not one person in a thousand knows why leaves change their color in autumn," remarked an eminent botanist the other day. "The common old-fashioned idea is, that all this red and golden glory we see now is caused by frosts. A true and scientific explanation of the causes of the coloring of leaves would necessitate a long and intricate discussion. Stated briefly, and in proper language, those causes are these:—The green matter in the tissue of a leaf is composed of two colors, red and blue. When the sap ceases to flow in the fall, and the natural growth of the tree ceases, oxidation of the tissue takes place. Under certain conditions the green of the leaf changes to red; under different conditions it takes on a yellow or brown tint. This difference in color is due to the difference of combination of the original constituents of the green tissue, and to the varying conditions of climate, exposure, and soil. A dry, cold climate produces a more brilliant foliage than one that is damp and warm. This is the reason that American autumns are so much more gorgeous than those of England.—Field and Forest.

That money talks is quite the most

Accepted view,

And yet it is on speaking terms

With few.



## A Sunday Woman.

Mrs. Andrews had gone to stay with a sick neighbor till the doctor came. After he had seen the patient, and had left directions and medicine, she followed him to the outer door and asked him anxiously what the matter was with Mrs. Gay.

"She is tired out with hard work," answered the doctor. "And you will be in the same fix yourself," he added, giving her a searching glance, 'if you work so hard and don't take any rest.'"

Mrs. Andrews stayed with her neighbor all afternoon, till Mrs. Gay's cousin, who had been hastily sent for, came to take care of her. As she walked along the country road to her own home, Mrs. Andrews' mind was full of anxiety and apprehension. The doctor's words, "You will be in the same fix yourself, if you work so hard and don't take any rest", kept ringing in her ears. How could she take any rest? How could she work less hard? And if she should be sick, who could come and take care of her? She had no relatives who were at liberty and hired help was so expensive. What should she do? There was a dreadful sinking of her heart and a terror of the future, which was almost enough in itself to make her sick. She got supper mechanically, and the conversation at the table hardly reached her ears.

The family consisted of herself and husband and their three grown-up sons. The sons were good-looking young fellows, strong and brown. Mr. Andrews was a healthy, hearty man, a strong contrast to his pale, delicate-looking wife. He was what is sometimes sneeringly called a "Sunday man." He and his family always attended church, and he did no business of any kind on Sunday. If people wanted to see his live-stock, or talk over any farm matters with him they must come some week day, he would not see them Sunday. Some of his neighbors ridiculed him, but those whose opinion was worth having respected him for the stand he had taken.

After the supper work was done, Mrs. Andrews went to her room. She sat in the dark and tried to think what she could do to avert the calamity which seemed to be coming upon her. She knew that something must be done. She realized from her own feelings, and the dreadful weariness which had been upon her of late, that what the doctor had said was only too true. "I must not get sick," she kept repeating to herself. "But what can I do to keep well?"

Suddenly there came to her troubled mind these words: "Six days shalt thou labor and do all thy work." Ah! That was what she must do, and what she had never done before, rest on Sunday. She thought of the way she usually spent Sunday. The family rose late, and she had to hurry to get the dishes done and the house in order. Then she had to hurry and dress for church. She never stopped after church to speak to friends, but came directly home, put on another dress, and cooked the dinner. After the dinner dishes were washed, there was, usually, an hour or two when she sat in the sitting-room and read as long as she could keep awake. Then she had to get supper, do more dishes, strain the milk, and put the Monday's washing to soak. She sighed as she reviewed her Sunday's work. "No wonder I am tired out," she said to herself. "Yes, that is what I must do, it is all I can do—rest on Sunday."

All that week, Mrs. Andrews was planning for her Sunday. Saturday night came, and, as Mr. Andrews and the boys sat around the lamp reading, she came in and stood watching them. At length she spoke, and they looked up.

"Father," she said, "the neighbors call you a Sunday man. It is a principle with you not to do any unnecessary work on that day. You have lived up to your principles, and I have heard you say, more than once, that you are better off in every way for resting one day in the week. I am sorry to say that I have not taken the same stand that you have, and, as a consequence, I have, at last, become tired and worn out, like Mrs. Gay, only not quite so bad. Now, I am going to turn over a new leaf, and become a Sunday woman, and not do any unnecessary work on the day of rest."

Four very astonished faces looked at her as she finished this little speech. Her listeners had no idea of the courage it took to make it.

"What!" exclaimed Mr. Andrews. "Aren't you going to get the meals as usual? I should think that was necessary."

"I am going to get a good breakfast, and I will make the house tidy, but that is all the work I shall do."

There were exclamations of dismay, but she broke in upon them. "You won't starve," she said, smiling a little. "I've no idea of making you fast all day. I have made a quantity of sandwiches, there are pies and a sponge cake, and a great platter of baked apples. Then, if that is not enough, why, there is always plenty of milk and bread and butter. You all know where the pantry is, and when you are hungry, you can go there. Or, if it be pleasant, we can put the things in a basket, and go out in the woods to eat. But I am not going to cook a hot dinner, or get supper, either."

Mrs. Andrews was usually such a mild little body, that when she made this last very decided statement, Mr. Andrews and the boys were rather scared, and subsided into silence. All the rest of the summer and fall, Mrs. Andrews persisted in her revolutionary conduct. She enjoyed her ride to and from church. She stayed after the service and talked with her friends. She picnicked with the rest of the family in the woods, or in the kitchen, according to the weather. Sunday afternoon she took a long nap, and spent some time reading. When it was fair she went long walks with her husband and the boys, through shady lanes and cart paths. She began to feel less tired, and having once asserted herself, it became easier the second time. So she began to call on the boys to do little things to help her, and they began to realize that she was over-worked, and grew more thoughtful of her. Neither they nor Mr. Andrews grew thin and feeble for the lack of a hot Sunday dinner and supper. The washing, being put to soak early Monday morning, came out as white as ever. And Mr. Andrews found that it did not hurt him to strain the milk and wash the pail one night in the week.

After four months of the new order of things, Mrs. Andrews asked her husband one day if he wanted her to go back to the old kind of Sunday.

"No," he answered, emphatically, and he added, "I wish I hadn't been such a fool Elizabeth: but I am glad that you had the sense to become a Sunday woman."

At a recent meeting in Winnipeg, Mr. Russell, as a representative of Catholic opinion, said:—"Our people must be trained from the cradle up; the little ones must be taught to abhor uncleanness and to reverence chastity, and if we are really zealous for the good cause, let us, when we see people struggling to provide the means of training up a God-fearing and virtuous generation, encourage them by all means, and certainly put no obstacle in their way."

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### Ian Maclaren.

The Rev. John Watson, D. D., better known all over the world by his literary cognomen, "Ian Maclaren," has become so universally known by his delicately appreciative sketches of the best side of Scottish character, that the following sketch, by his friend, Robertson Nicoll, will be read with interest. It was Mr.

Ian Maclaren has a distinct recollection. The formative years of his childhood were spent, however, first at Perth and then at Stirling. He was an only child, and his father and mother were both remarkable personalities—the father strongly religious, profoundly interested in religion, and a devoted elder of the Free Church of Scotland. Ian Maclaren's mother, to whose memory his last book is dedicated, was in some respects different from her husband.

Church in Scotland, so that his sympathies were well divided between the great Presbyterian Churches of that country. In due time he went to Edinburgh University, and although diligent and studious, was not specially impressed by any of the professors, with the single exception of Dr. Masson, who has just retired from the chair of English Literature. He liked classics, and was attracted by Sellar, the professor of Latin. In philosophical stud-



THE THOROUGHbred.

Nicoll, who, as editor of *The British Weekly*, first led Watson and Barrie into the field of literature, which they have since cultivated with such wonderful success:

Rev. John Watson, "Ian Maclaren," author of "Beside the Bonnie Brier Bush," "The Days of Auld Lang Syne," etc., is a pure Scot, although he was born in Manningtree, Essex, where his father, who was engaged in the excise, and reached a very high position in that service, was stationed at the time. Very shortly after his birth the family removed to London, of which

She was Highland, and understood Gaelic, though she could not speak it. It was, she used to say, the best language for love and for anger. Though also firm in her religious convictions, she was not like her husband, an Evangelical, but leaned rather to the highest type of Moderatism, as it is called in Scotland. Young Watson was accustomed for many years to spend the summers with his uncles, who were farmers in a large way, first about Blairgowrie, then about Meigle, both in Perthshire. They belonged to the Established

ies he was also interested, and was secretary, and afterwards president of the Philosophical Society connected with the University. When he had completed his studies, he decided to be a minister of the Free Church. This was the strong wish of his father, and he was willing, although he never felt the call to the ministry, as some say they have felt it, whose usefulness has certainly not been greater than his. He passed through the curriculum of the New College, Edinburgh.

He served as assistant for a short time



to Dr. J. H. Wilson, of the Barclay church in Edinburgh, and then became minister of the Free Church in Logiealmond, in Perthshire, now so well known as Drumtochty. There his uncle had been minister before the Disruption of 1843. The congregation was very small, but the work was pleasant, and the young minister made a close study of his people. It is noteworthy that while at Logiealmond he had literary plans very much in the line of those which were carried out twenty years later. He had, in fact, conceived a book which would have been very much on the lines of "Beside the Bonnie Brier Bush," but self-distrust prevented him from going on. Doubtless neither he nor the world has suffered from this delay. A brilliant popular preacher, he naturally soon received invitations to leave his quiet parish, and he ultimately accepted one from St. Matthew's in Glasgow, to be colleague to Dr. Samuel Miller. But Mr. Watson found his true sphere, when, three years later, he became minister of a new Presbyterian church built in Sefton Park, Liverpool. The building was a very handsome one, and the neighborhood was gradually rising. The young minister was now able to draw round him people of his own type, and he thinks he began to find himself shortly after he settled in Liverpool. Now the fine church is constantly crowded by one of the largest and most influential congregations in Liverpool, and there cannot be much hesitation in saying that among English preachers of the younger generation Mr. Watson holds a foremost if not the first place. Although he writes his sermons, he does not read them, and he is a speaker of extraordinary force and clearness. Touches of pathos are not infrequent in his sermons, but, as a rule, he avoids humor. He has a strong sense of reverence, and the service in Sefton Park church, which has been carefully arranged by himself, satisfies every requirement alike of culture and devotion.

Mr. Watson went on happily and busily in this service for seventeen years, making for himself a great reputation in Liverpool, where he was, and is, perhaps, the most influential minister, but not much known outside, save in Presbyterian circles. It is only a short time since he was led to write the sketches on which his literary fame has been established.

### The Mother and the Boy.

The mother shapes the boy's character, her face the first sight, her arms the first refuge, her life the first example. But for Rachel and her training the history of Joseph and the Jewish nation would have been entirely different. The hand that rocks the cradle rules the world. The time for seed-planting of true greatness is in the early years of a boy's life. This is the mother's opportunity. The spirit of God from heaven, the influence of men on earth and the temptations of satan surround the boys of to-day. Mothers, guard the boys before it is too late. Plant your seed. Take interest in everything your boy does. Let him have games at home, or he will go where there is no home. Plant the seed of greatness, kindness and purity while the ground is soft, although you do not live to see the fruitage.—Rev. T. C. Easton, Washington.

The man (at a restaurant)—"What sort of a chicken do you call this, waiter?" The waiter—"That, sir, I believe, is a Plymouth Rock." The man—"Ah! I'm glad it has some historic interest: I thought it was just an ordinary cobblestone."

### "It is Always So."

Across the meadow, with clover sweet,  
I wandered one evening with weary feet,  
For my heart was heavy with untold woe.  
For everything seemed to go wrong, you know,

'Twas one of those days when cares and strife  
Quite overshadow the good of life.

So, lone and sad, 'neath the twilight stars,  
I wandered down to the pasture bars.  
To the pasture bars, 'neath the hillside steep,  
Where patiently waited a flock of sheep  
For the happy boy with whistle and shout,  
Who was even now coming to turn them out.

"Good evening!" said he, with boyish grace,  
And a smile lit up his handsome face.  
He let down the bars; then we both stepped back,  
And I said, "You have more white sheep than black."

"Why, yes," he replied, "and didn't you know?  
More white than black; why, 'tis always so."

He soon passed on with his flock round the hill,  
But down by the pasture I lingered still,  
Pondering well on the words of the lad,  
"More white than black," more good than bad.  
More joy than sorrow; more bliss than woe;  
"More white than black," and "'tis always so."

And since that hour, when troubles rife  
Gather, and threaten to shroud my life—  
Or I see some soul on the downward track—  
I cry, there are more white sheep than black.  
And I thank my God, that I learned to know  
The blessed fact, it is always so.

—Good Housekeeping.

### Good Luck.

In replying to the query, "Does not luck sometimes play a good part in a man's success?" Edward L. Bok writes: "Never." Henry Ward Beecher answered this question once for all when he said: 'No man in this world prospers by luck, unless it be the luck of getting up early, working hard, and maintaining honor and integrity.' What so often seems, to many young men, on the surface, as being luck in a man's career, is nothing more than hard work done at some special time. The idea that luck is a factor in a man's success has ruined thousands; it has never helped a single person. A fortunate chance comes to a young man sometimes just at the right moment. And that some people call luck. But that chance was given him because he had at some time demonstrated the fact that he was the right man for the chance. That is the only luck there is. Work hard, demonstrate your ability, and show to others that if an opportunity comes within your grasp, you are able to use it."

To mak' a happy fireside clime  
For weans and wife,  
Is the true pathos and sublime  
O' human life. —Burns.

"Whatsoever a man soweth that shall he also reap," is one of the corner stones of the eternal frame of things.—Rev. Dr. Whiton.

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### Life Needs Tuning.

One day when I was with Mr. Hicks, the painter, I saw on his table some high-colored stones, and I asked him what they were for. He said they were to keep his eye up to tone. When he was working in pigments, insensibly his sense of color was weakened, and by having a pure color near him he brought it up again, just as the musician, by his test fork, brings himself up to the right pitch. Now, every day men need to have a sense of the invisible God. A clear conception of the perfect One produces a moral impression; and it does not make any difference how you get it. If you are poetical, you get it through imagination; if you have large veneration, you get it through that quality. If you are most easily affected through your emotions, you get it through these elements. If by the intellect, by the imagination, by the affections or by the moral sentiments, you are exalted into the conscious presence of God, then you have obtained that which renders prayer of transcendent value, and which gives tone to your whole nature. But no nature is of such magnitude that it does not need, every day, to be tuned, chorde, borne up to the ideal of a pure and lofty life.—Henry Ward Beecher.

### Visiting the Sick.

A writer gives this advice on the above subject:—If you are to see the invalid, some one will open the door, when you should walk in quietly, and in a gentle tone exchange the compliments of the day, and express a hope that your visit will not be wearisome, and express a hope that all is going well. Having done so, if there is any matter of mutual interest it is not amiss to speak of it. If you both belong to some society, and there has been any special action or marked success in any branch of its work, it may furnish material for pleasant thoughts after your departure. Do not remain over ten minutes, unless specially asked to do so, and even that time is too long if there are any symptoms of nervousness or weariness. Above all, do not talk of disagreeable things or relate any of the misfortunes or mishaps that have befallen any members of the community. A sick room is cloudy enough without bringing shadows from the outside. Studiously avoid recommending medicines unless there is a most excellent reason for doing so. If a physician is employed, it is a discourtesy to him to urge other remedies upon the patient.

These are a few of the rules to be observed in visiting the sick. It might be said, in the words of an eminent physician of the last generation:—"Amend these by staying away altogether," for, as a rule, visiting the sick room is productive only of evil.

By all means make calls of inquiry, but never think it incumbent upon you to entertain sick people, unless they are well advanced in convalescence and your presence is earnestly desired.—Journal of Agriculture.

Home is the residence, not merely of the body, but of the heart; it is a place for the affections to unfold and develop themselves; for children to love, and learn; and play in; for husband and wife to toil smilingly together, and make life a blessing. The object of all ambition should be to be happy at home; if we are not happy there we cannot be happy elsewhere; it is the best proof of the virtues of a family circle to see a happy fireside.—Ex.

### Sharp Saws.

A good reputation is like an eel—hard to get and harder to hold.

To err is human, and to say "I told you so" is human nature.

A pretty trimming for a woman's bonnet is a good-humored face.

Time is always too short for those who improve it most.

Happiness we must provide for ourselves, other people may provide our pleasures.

Idleness, like rust, consumes, faster than labor wears; the key that is being always used is always bright.

Quick observation is useful, but to make and keep friends there are many things we must not see.

To serve God. Herein lies true happiness, the happiness of yesterday, the happiness of to-day, the happiness of all days. But we must know this, and when we know this we must act. Many never know it, and of those who know it, many never commence to act; of those who commence, many do not continue, or else continue so feebly that their search for happiness serves merely to weary and disgust them still more with their false happiness; that is their real happiness.—Louis Veuillot.

I wouldn't give ten cents for ten acres of farmers who sit around on the boxes in front of the grocery or dry goods store, retailing or listening to vile gossip or smutty story. What a calling for an intelligent being! There is so much that we can know if we only improve such moments. It is becoming necessary, too, for the farmer to be posted on a multitude of matters, in order to hold his own in the conflict of life. Hence his topics should be useful. He should be constantly on the lookout to learn. He should know his neighbors and their habits of usefulness and make his whole life subservient to his own and the public good.—Edw. B. Heaton.

Cultivate a taste for pets among the children. A pair of Bantams, canaries, gold fish, or fancy pigeons, will interest them for many a day, and may lead to better things. Boys and girls who love such things are never bad at heart; and if encouraged by being presented with something of this sort that they fancy, to have for their "very own," it makes them better, it keeps them out of bad company and under home influence. Should they tire of one thing, renew the interest by getting something new for them. Besides the pleasure to be derived, they may be made a source of profit. A good singing canary bird can always be sold at a fair price, while the cost to raise it is small. Good specimens of Bantams or pigeons sell readily, too.

It is experience that counts. Glance over the advertising columns of a city newspaper: "Wanted, an experienced clerk," "an experienced type-writer," "an experienced cook," "an experienced brick-layer," and so on throughout the list. Business men value experience. Experience commands the best places, the best work, the best salaries. A green hand becomes valuable to his employer in proportion as time and circumstances school him. It often occurs that our experiences, though bitter and seemingly unfortunate, are the best teachers we could possibly have, and show us how, through failure, to attain success. The failure of success is sometimes better than the success of a failure. That sounds anomalous, but is it not true? It is only the novice who undervalues experience.

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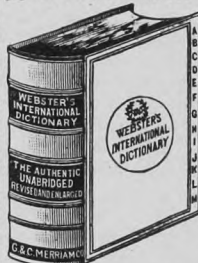
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